

practice with the deaf athlete population. However, no studies are found in the literature that highlight its use by professionals working with this population.

**Objectives:** Evaluate the knowledge and use of EBP by physical therapists who work in deaf sports

**Methods:** This is a pilot study, conducted in parallel with a quantitative exploratory cross-sectional study. Brazilian physical therapists participated, female and male, who had been working for at least 3 months in deaf sports and who were associated with state deaf sports federations or the Brazilian Confederation of Deaf Sports (CBDS). A semi-structured questionnaire was used, prepared by the research team, with questions about personal and demographic data, professional training, and the use of EBP. Nominal and/or ordinal variables were described in absolute and relative frequency.

**Results:** Five physical therapists ( $30.4 \pm 3.36$  years) participated, mostly male (60%,  $n=3$ ). 80% of the participants ( $n=4$ ) had already heard about EBP, with 60% ( $n=3$ ) indicating that they use EBP partially in their appointments, and 20% ( $n=1$ ) said that EBP is a determining factor in choosing the best conduct. As resources used for clinical decision-making, 100% ( $n=5$ ) use clinical experience, 80% ( $n=4$ ) use clinical practice guidelines and 60% ( $n=3$ ) use scientific articles, demonstrating a non-homogeneous use of the pillars that support EBP. Regarding the updating of clinical knowledge, 80% ( $n=4$ ) took courses and participated in scientific events/conferences, 60% ( $n=3$ ) use scientific articles, 40% ( $n=2$ ) reported participating in study groups and only 20% ( $n=1$ ) reported using books, suggesting that knowledge updating may have often been based on sources with high risks of bias.

**Conclusion:** Physical therapists who work in deaf sports are aware of EBP, use resources related to it, but still encounter difficulties and limitations for its applicability in clinical practice. Future studies, with more professionals, are necessary for a national overview of the knowledge of EBP by physical therapists who work in deaf sports.

**Implications:** There are still no studies in the literature evaluating the influence of EBP on the performance of the physical therapist in Brazilian deaf sports, despite knowing that this can promote adequate, efficient, and higher quality physical therapy treatment. From the data found, professional education policies to promote greater knowledge and use of EBP by these professionals are necessary for a more qualified service to the deaf athlete population.

**Keywords:** Physical Therapy, persons with Hearing Impairments, Sports for Persons with Disabilities

**Conflict of interest:** The authors declare no conflict of interest.

**Acknowledgment:** We thank CAPES, all the physical therapists who participated in our research and the São Paulo and Paraná deaf sports federations (FDSESP and FDSP).

**Ethics committee approval:** UFSCar Human Research Ethics Committee (CEP-UFSCar) - CAAE: 58267522.0.0000.5504.

<https://doi.org/10.1016/j.bjpt.2024.100756>

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## COMBINATION OF CLINICAL AND GAIT MEASURES TO CLASSIFY FALLERS AND NON-FALLERS IN PARKINSON'S DISEASE

Hayslenne Andressa Gonçalves de Oliveira Araújo<sup>1,2</sup>,  
Rodrigo Vitorio<sup>2</sup>, Suhaila Mahmoud Smaili<sup>1</sup>

<sup>1</sup> Department of Sport, Exercise and Rehabilitation, Northumbria University, Newcastle upon Tyne, United Kingdom

<sup>2</sup> Physiotherapy department, State University of Londrina (UEL), Londrina, Paraná, Brazil

**Background:** The multifactorial nature of falls in Parkinson's disease (PD) is well described. Clinical aspects (e.g., fear of falling and disease severity) and gait deficits (e.g., difficulties with dual task

walking and freezing of gait episodes) are among identified risk factors of falling. However, optimal assessment for the identification of fallers remains unclear.

**Objectives:** To identify clinical and objective gait measures that best discriminate fallers from non-fallers in PD, with suggestions of optimal cutoff scores.

**Methods:** Cross-sectional study composed by 127 individuals with mild to moderate PD classified as fallers ( $\geq 2$  falls) or non-fallers based on previous 12 months falls. Clinical measures (demographic, motor, cognitive and patient-reported outcomes) were assessed with standard scales/tests. For measuring gait parameters, participants were asked to walk, at a self-selected pace, back and forth on a straight 9-m walkway for 2 minutes in single and dual-task (i.e., forward digit span) conditions, while instrumented with eight, synchronized inertial sensors at the sternum, lumbar spine, bilaterally on the wrists, shins, and feet. We extracted 24 clinical measurements and 39 objective variables from those instruments. Receiver operating characteristic (ROC) curve analysis identified measures (separately and in combination) that best discriminate fallers from non-fallers; we calculated the area under the curve (AUC) and identified optimal cutoff scores (i.e., point closest-to-(0,1) corner).

**Results:** Thirty-one participants (24.4%) were classified as fallers and 96 (75.6%) as non-fallers. Fallers had more severe motor symptoms and more advanced disease stage than non-fallers. Single gait and clinical measures that best classified fallers were foot strike angle (AUC=0.728; cutoff=14.07°) and the Falls Efficacy Scale International (FES-I; AUC=0.716, cutoff=25.5), respectively. Combinations of clinical+gait measures had higher AUCs than combinations of clinical-only or gait-only measures. The best performing combination included FES-I score, New Freezing of Gait Questionnaire score, foot strike angle and trunk transverse range of motion (AUC=0.85).

**Conclusion:** The combinations of clinical and gait measures have higher discriminative ability in classifying fallers from non-fallers among people with PD than combinations of clinical-only and gait-only measures.

**Implications:** The falls consequences represent great independence and autonomy loss for patients and high costs to health-care services. In this context, it is necessary to devote attention to falls management in PD, including the identification of PD-specific markers for risk of falling. Therefore, the use of wearable inertial sensors is useful and can enhance the traditional fall risk assessment in PD.

**Keywords:** Parkinson, Gait, Falls

**Conflict of interest:** The authors declare no conflict of interest.

**Acknowledgment:** To participants of Research and Neurofunctional Physiotherapy Group (GPFIN) e for support from **Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - (CAPES)**.

**Ethics committee approval:** London-Bloomsbury NHS Research Ethics Committee (and Health Research Authority; 20/LO/1036, 05/10/2020) and the Institutional Review Board of the Oregon Health & Science University (#9903).

<https://doi.org/10.1016/j.bjpt.2024.100757>

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## INCREASING OLDER ADULTS' VITALITY THROUGH A PRIMARY CARE INTERVENTION

Helen Tatiane Santos Pontes<sup>1</sup>, Naina Yuki Vieira Jardim<sup>1</sup>,  
Victor Oliveira da Costa<sup>1</sup>, João Bento-Torres<sup>1</sup>,  
Cristovam Wanderley Picanço-Diniz<sup>1</sup>,  
Natáli Valím Oliver Bento-Torres<sup>1</sup>

<sup>1</sup> Neurodegeneration and Infection Research Laboratory, Institute of Biological Science/João de Barros Barreto University Hospital,