

## Intervenção por Realidade Virtual associada a esteira ergométrica sobre

### o congelamento de marcha na Doença de Parkinson

Virtual Reality intervention associated with treadmill on gait freezing in Parkinson's Disease

Intervención mediante Realidad Virtual asociada a la cinta de correr sobre el congelamiento de la marcha en la enfermedad de Parkinson

Allana Grait de Oliveira<sup>1</sup>, William Souza Monteiro<sup>1</sup>, Rafaela Cordeiro de Macêdo<sup>2</sup>.

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#### RESUMO

**Objetivo:** Investigar se a intervenção por Realidade Virtual associado a esteira ergométrica beneficiará o congelamento de marcha no paciente com Doença de Parkinson. **Métodos:** Um estudo quantitativo, longitudinal, experimental, não controlado e aberto. Incluindo 2 pacientes de ambos os sexos e idade de 77 anos, com diagnóstico de Doença de Parkinson e que possuem congelamento de marcha. Ocorreu na Clínica Escola de Fisioterapia do Centro Universitário do Estado do Pará, 2 vezes por semana durante 5 semanas, com duração de 30 minutos a sessão. Foram avaliados no pré e pós-tratamento por meio de escalas de Índice de Marcha Dinâmica (IDM), Escala de Congelamento de Marcha (FOG-Q) e Escala Unificada de Avaliação da Doença de Parkinson (UPDRS) para o estadiamento da doença. **Resultados:** A intervenção levou a uma melhora discreta dos instrumentos de avaliação utilizados, ( $p=0,684$ ) em IDM, ( $p=0,776$ ) em FOG-Q e ( $p=0,544$ ) em UPDRS, enfatizando a melhora principalmente da marcha com dupla tarefa. **Conclusão:** A intervenção mostrou benefícios no congelamento de marcha, evidenciando a efetividade deste tratamento devido a evolução positiva dos instrumentos utilizados, todavia, não foi um estudo com número elevado de sessões e de participantes, limitando os dados representados.

**Palavras-Chave:** Doença de Parkinson, Marcha, Realidade Virtual.

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<sup>1</sup> Centro Universitário do Estado do Pará (CESUPA), Belém-Pará. <sup>2</sup> Centro Universitário do Estado do Pará (CESUPA), Belém-Pará.

### ABSTRACT

**Objective:** To investigate whether the intervention by Virtual Reality associated with a treadmill will benefit the freezing of gait in patients with Parkinson's disease. **Methods:** A quantitative, longitudinal, experimental, uncontrolled, open study. Including 2 patients of both genders and age of 77 years, diagnosed with Parkinson's Disease and who have freezing of gait. It took place in the Physiotherapy School Clinic of the Centro Universitário do Estado do Pará, 2 times a week during 5 weeks, with a duration of 30 minutes. They were evaluated pre and post-treatment by means of Dynamic Gait Index (DMI), Freezing Gait Scale (FOG-Q) and Unified Parkinson's Disease Rating Scale (UPDRS) for the staging of the disease. **Results:** The intervention led to a slight improvement in the assessment instruments used, ( $p=0.684$ ) in MDI, ( $p=0.776$ ) in FOG-Q and ( $p=0.544$ ) in UPDRS, emphasizing the improvement mainly in dual-task gait. **Conclusion:** The intervention showed benefits in freezing the gait, evidencing the effectiveness of this treatment due to the positive evolution of the instruments used, however, it was not a study with a high number of sessions and participants, limiting the data represented.

**Keywords:** Parkinson Disease, Gait, Virtual Reality.

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### RESUMEN

**Objetivo:** Investigar si la intervención por Realidad Virtual asociada a una cinta rodante beneficiará la congelación de la marcha en pacientes con enfermedad de Parkinson. **Métodos:** Un estudio cuantitativo, longitudinal, experimental, no controlado y abierto. Incluye 2 pacientes de ambos sexos y de 77 años de edad, diagnosticados con la enfermedad de Parkinson y que tienen congelación de la marcha. Se realizó en la Clínica Escola de Fisioterapia del Centro Universitário do Estado do Pará, 2 veces por semana durante 5 semanas, con una duración de 30 minutos. Fueron evaluados antes y después del tratamiento mediante las escalas del Índice de Marcha Dinámica (DMI), la Escala de Marcha Congelada (FOG-Q) y la Escala Unificada de Calificación de la Enfermedad de Parkinson (UPDRS) para la estadificación de la enfermedad. **Resultados:** La intervención condujo a una ligera mejora en los instrumentos de evaluación utilizados, ( $p=0,684$ ) en MDI, ( $p=0,776$ ) en FOG-Q y ( $p=0,544$ ) en UPDRS, destacando la mejora principalmente en la marcha bitarea. **Conclusión:** La intervención mostró beneficios en la congelación de la marcha, evidenciando la efectividad de este tratamiento debido a la evolución positiva de los instrumentos utilizados, sin embargo, no fue un estudio con un número elevado de sesiones y participantes, limitando los datos representados.

**Palabras clave:** Enfermedad de Parkinson; Marcha, Realidad Virtual.

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