



ΠΑΝΕΠΙΣΤΗΜΙΟ ΔΥΤΙΚΗΣ ΑΤΤΙΚΗΣ

ΣΧΟΛΗ ΕΠΙΣΤΗΜΩΝ ΥΓΕΙΑΣ ΚΑΙ ΠΡΟΝΟΙΑΣ

Τμήμα Φυσικοθεραπείας

## **DOCTORAL THESIS ABSTRACT**

**TITLE: The Impact of Dance in Parkinson's Disease**

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Parkinson's Disease (PD) is an idiopathic, neurodegenerative, and progressive chronic movement disorder<sup>1</sup>. Patients with PD show an important neurological reduction, as the disorder progresses, mainly by dysfunction of dopaminergic cells of the substantia nigra<sup>2</sup>.

Numerous studies demonstrate the benefits of regular physical exercise in PD, with aerobic exercise having a greater neuroprotective effect by stimulating brain neuroplasticity<sup>3</sup>. Several studies have shown that people with PD are more easily motivated to attend dance classes systematically than other forms of exercise, they have a high compliance rate with low dropouts, and often continue to practice dance outside the dance intervention<sup>4,5</sup>.

DfPD® (Dance for Parkinson's Disease®, or Dance for PD®) was developed by the Brooklyn Parkinson Group (BPG) in collaboration with the Mark Morris Dance Group (MMDG) in 2001 and it was designed to introduce people with PD to techniques used by dancers to control movement on the basis that these dance strategies would be both beneficial and enjoyable for them<sup>6</sup>. This intervention has previously been shown to exert beneficial effect on quality of life (QoL)<sup>7-10</sup>, motor functions<sup>9</sup>, cognition<sup>10</sup>, self-efficacy<sup>6</sup>, anxiety and depression<sup>10</sup> in people with PD. To our knowledge, there is no study investigating the effect of DfPD® on PD patients' sarcopenia and frailty, which are both clinical syndromes of great prevalence in PD<sup>11</sup>, and they have not been determined in any cross-sectional study in Greek PD patients. There is no any controlled study conducted internationally aiming at evaluating the effect of DfPD® on PD patients' fatigue.

Primary goal of the present randomized, controlled clinical trial (RCT) is to evaluate the effect of dance, through the use of DfPD®, on PD patients' QoL. Secondary goals are to evaluate the effect of dance, through the use of DfPD®, on PD patients' balance, motor and cognitive functions, depression, anxiety, fatigue, sarcopenia, frailty and body mass index (BMI).

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