

## Internet Appendix A13: Psychology

Figure A13.1 Illustrative Pitch Template

Pitcher's Name	Ria Vaportzis (29/9/14)
(A) Working Title	The Effectiveness of a Six-Month Dance Intervention in Parkinson's Disease and the Elderly
(B) Basic Research Paper	Is it possible to use dance as an intervention to improve motor and cognitive function in Parkinson's disease?
(C) Key paper(s)	Hackney, M.E. and G.M. Earhart, <i>Effects of Dance on Gait and Balance in Parkinson's Disease: A Comparison of Partnered and Nonpartnered Dance Movement</i> . Neurorehabilitation and Neural Repair, 2010. 24(4): p. 384-392. Kattenstroth, J.-C., et al., <i>Six months of dance intervention enhances postural, sensorimotor, and cognitive performance in elderly without affecting cardio-respiratory functions</i> . Frontiers in Aging Neuroscience. 5: p. 1-16 Volpe, D., et al., <i>A comparison of Irish set dancing and exercises for people with Parkinson's disease: A phase II feasibility study</i> . BMC Geriatrics, 2013. 13(1): p. 54.
(D) Motivation/Puzzle	Parkinson's disease (PD) and ageing are associated with reduced physical activity, poor mobility, and cognitive decline. Growing evidence suggests that physical activity can improve strength, balance, and mobility in PD patients and the elderly. Despite the short-term gains of physical activity, studies have shown limited long-term benefits; adherence to physical activity programs over the longer-term can be problematic. An entertaining activity like dancing may enhance adherence over the longer-term.
THREE	Three core aspects of any empirical project i.e. the IDioTs guide
(E) Idea?	The overall objective of this study is to assess the efficacy of 6 months of dance intervention in patients with PD and the elderly. The findings will provide important evidence into the effectiveness of a dance intervention on motor function, cognitive processes, and brain activity in PD patients and the elderly. It is hypothesised that motor function and cognitive processes will improve in PD patients and the elderly after 6 months of dance intervention.
(F) Data?	PD patients will be in the mild to moderately severe stage on the Hoehn & Yahr scale (stage 0-2.5). Older adults will be healthy individuals over the age of 50. PD patients will be recruited through a collaborator neurologist; elderly participants will be recruited through advertisements around Monash University, and through retirement villages and senior citizen clubs.

(G) Tools?	<p>Participants will attend a 60-90min salsa dance class once per week for 6 months. They will be tested at baseline (within 4 weeks prior to intervention), and at 24 weeks (at the end of the intervention).</p> <p><u>The following measures will be used with PD patients:</u></p> <ul style="list-style-type: none"> <li>• Unified Parkinson’s Disease Rating Scale (UPDRS) Total Motor Score (TMS) to assess motor impairment</li> <li>• A battery of neuropsychological tests to assess cognitive capacity: Symbol Digit Modalities Test, Emotion Recognition, Trail Making Test, Hopkins Verbal Learning Test-Revised, One Touch Stockings of Cambridge</li> <li>• UPDRS Total Functional Capacity (TFC) scale to assess functional capacity</li> <li>• EEG to examine brain activity during a dance routine</li> </ul> <p><u>The following measures will be used with the elderly:</u></p> <ul style="list-style-type: none"> <li>• A battery of neuropsychological tests to assess cognitive capacity: Symbol Digit Modalities Test, Emotion Recognition, Trail Making Test, Hopkins Verbal Learning Test-Revised, One Touch Stockings of Cambridge</li> <li>• EEG to examine brain activity during a dance routine</li> </ul>
TWO	Two key questions
(H) What’s new?	Most previous studies that employed dancing as an intervention in PD and the elderly have focused on improvement in cardiovascular parameters, muscle strength, and balance. Few studies have examined the effect of dancing on cognitive function, and to date there is no study that has investigated brain activity during dancing.
(I) So what?	If there is a positive effect of dance intervention on motor function and cognitive processes in PD patients and the elderly, then their quality of life is expected to improve. Therefore, dancing may be used as an alternative treatment in these populations.
ONE	One bottom line
(J) Contribution?	This study will be the first study to investigate brain activity in PD patients and the elderly while dancing, and therefore, it will provide evidence into the effect of a dance intervention on brain activity in these populations.
(K) Other considerations?	<p>Collaboration is desirable (psychologist, physiotherapist, dancer)</p> <p>High impact factor journals are realistic</p>