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Promising Intervention to Reduce Body Sway in Elderly People

One out of three people who are 65 years or older fall every year. Studies have shown a direct relationship between increased body sway and the incidence of falling in the elderly. Body sway increases with aging due to age related degenerative changes or higher incidence of diseases such as diabetes. The purpose of this study was to examine the effect of tactile feedback (novel intervention) compared to visual feedback on body sway in elderly with or without diabetes. Twenty eight normal healthy elderly people and 23 elderly with Type 2 Diabetes were assigned randomly to either tactile feedback or visual feedback intervention. Body sway was measured using a balance platform while standing on platform with eyes open then eyes closed and standing on foam with eyes open then eyes closed. There was no significant difference between groups using visual feedback or tactile feedback. However, there was a significant reduction in body sway using tactile feedback in elderly while standing on foam with eyes open ($1.0 \pm .31$ vs. $1.9 \pm .8$, $p=.006$) and eyes closed ($1.8 \pm .7$ vs. 3.3 ± 1.5 , $p=.001$). In the elderly with diabetes, there was a significant reduction in body sway using tactile feedback while standing on foam with eyes closed ($1.4 \pm .5$ vs. $2.3 \pm .8$, $p=.045$) but not with eyes open. There was significant reduction in body sway in elderly with diabetes using visual feedback while standing on foam with eyes open ($1.3 \pm .5$ vs. 2.1 ± 1.1 ; $p=.018$) and eyes closed ($2.0 \pm .8$ vs. 3.1 ± 2.1 ; $p=.003$). There was significant reduction in body sway using visual feedback in the elderly while standing on foam with feet apart and eyes open ($1.4 \pm .7$ vs. $1.8 \pm .9$; $p=.023$), and eyes closed ($1.9 \pm .9$ vs. 3.4 ± 1.8 ; $p=.002$). This study offers a novel technique to improve body balance in elderly with or without diabetes.

Biography

Alshammari Faris has a BSc in Physical Therapy from the Hashemite University, Jordan. He pursued his higher education in USA at Loma Linda University where he achieved a Master's degree in Physical Therapy in 2010 and PhD in Rehabilitation Science in 2015. He is an Assistant Professor at the Hashemite University, Physical and Occupational Therapy Department, Jordan. He has published more than 23 papers in reputed journals. He invented new intervention (Tactile Feedback System) to improve body balance in elderly. He received many Excellence Awards and Full Scholarship to finish his Master's and PhD.

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