

Effects of Home Exercise Balance Program on Biodex® Testing and Hoverboard Time Trials

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The purpose of this project was to identify if an ankle strategy exercise program will decrease the risk of injury when riding on a hoverboard. Hoverboards are a cause of serious injuries throughout the U.S. but continue to be purchased for recreational use and public transportation. To see if a simple exercise program could decrease falls and injuries, a sample of convenience of 30 participants ranging from 18-30 years old volunteered from the College of Health Professions at Wichita State University. They received a baseline Biodex reading along with a baseline for time and falls through an obstacle course on a hoverboard. 15 participants performed the following exercises: ankle sway, single leg balance, heel raises progressing to: larger ankle sway movements, single leg balance on labile surfaces and all came back six weeks later to be re-measured. When these results were analyzed there were no statistically significant results. Despite the results not being statistically significant, the experimental group did improve to a higher degree in terms of reducing the number of falls and course time. With this research and other projects like it, if improved, hoverboard injuries may be prevented.