The Correlation Between Physical Activity and Balance in the Elderly

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Poor balance in the elderly has caused many falls, serious injuries, and deaths over the years. To reduce the incidence of falls, a systematic assessment was done on the elderly population in Saint George, Utah to see if there was a correlation between good balance and physical activity. 30 participants were tested from three age ranges: 60-69, 70-79, and 80-89, evenly split from each gender. All participants were asked to complete The PASE (Physical Activity Scale in the Elderly) Survey and five tests from the Berg Balance Scale. Calculating scores from each participant and then analyzing data through a one-way ANOVA test comparing physical activity to balance, a p-score of 0.248 was found showing no statistical significance. Two separate one-way ANOVA tests were used to compare the age groups to their physical activity scores and then to their balance scores. Comparing the different age groups to physical activity scores resulted in a p-value of 0.023 showing there is statistical significance that as one gets older one participates in less physical activity. When age groups were compared to balance, a p-value of 0.086 resulted which is statistically significant at the 90th percentile. This shows that as one gets older in age, one's balance naturally decreases. In conclusion, there was no evidence that physical activity improves balance in the elderly; however, there was evidence showing that as one gets older, one usually participates in less physical activity and naturally has worse balance.

Awards Won:

Lawrence Technological University: STEM Scholar Award, a tuition scholarship of $19,650 per year, renewable for up to four years and applicable to any major

University of Texas at Dallas: Scholarship of $5,000 per year, renewable for up to four years