ABSTRACT

This study aimed to examine the effect of manipulation of virtual environments, such as lane width and lane difficulty, on the cycling activities of individuals of different age groups. The T-test method is used to compare Virtual Reality-based fitness bike users between young and old age groups. The results showed a significant difference between the averages of the two age groups. Based on the analysis of the independent sample test, the young age group has a higher average than the older age group in maintaining a position in a narrow path and overcoming obstacles at every level. These findings suggest a different influence of the factors or variables tested in both groups. This research provides insight into the differentiating factors between age groups in the use of Virtual Reality-based fitness bikes. The implications could be used in the development of more effective exercise apps and programs for different age groups. This discovery can be used as a basis for designing cycling experiences that better suit the needs and characteristics of specific age groups. This study shows significant differences between young and old age groups in the use of Virtual Reality-based fitness bikes. This provides a better understanding of how virtual environments can affect the cycling activities of individuals of different age groups. The implications are important in the development of exercise programs that suit the needs and preferences of different age groups, with the aim of maintaining health and fitness effectively.

Keywords: Virtual Reality, T-test method, independent sample T-Test.