

MVPA while playing DDR and EyeToy

Yang, S.P. & Foley, J.T. (2008) Comparison of MVPA while playing DDR and EyeToy. *Research Quarterly for Exercise and Sport*, 79 (1 Supplement), A-17.

Abstract:

Significance: The USDHHS recommends that children accumulate at least 60 minutes of moderate to vigorous physical activity (MVPA) each day. Regular physical activity is believed to be an important component for reducing the levels of obesity. One way to increase physical activity levels that is gaining popularity is interactive video games (exergames). This is evidenced by its use in school districts throughout the US and also in middle schools throughout the state of West Virginia. Two of the more popular exergames are Dance Dance Revolution (DDR) by Konami, Inc. and EyeToy Play by Sony, Inc. DDR is a dance simulation game which requires the player to step (lower-body) on a motion sensing dance pad; whereas, EyeToy is a game that requires the use of the arms (upper-body) to play the games. At this time, there is little evidence to suggest one game is more effective than the other for accumulating MVPA. The purpose of this study was to investigate the differences in time spent in MVPA while playing DDR and EyeToy. **Design:** Participants in this study were 12 children (ages 9-18) from a local YMCA that were invited to play both DDR and EyeToy while wearing a heart rate monitor. Seven of the children were girls; five were boys. Each child was permitted to play each game on different days for up to 45 minutes. **Results:** An analysis of gender difference of each game revealed no significant difference ($p = .455$); therefore, the data was collapsed. Overall, participants spent more time in MVPA while playing DDR when compared to EyeToy, 80.84% to 53.45% respectively. This difference was found to be significant ($p = .039$) using a Wilcoxon Signed Ranks Test. For this study, it appears that playing DDR was more effective than EyeToy for accumulating MVPA. It is important to note that both exergames were played at MVPA for at least half of the time (≥ 20 mins), and all participants played the entire 45 minutes except one. These findings suggest that these two exergames could be healthy alternatives to other physical activities for accumulating the recommended 60 minutes of MVPA.



Contact: yangs@cutland.edu