Running Head: Nintendo Wii and Calories: THE ACCURACY OF THE CALORIE EXPENDITURE FOR EA SPORTS ACTIVE ON THE NINTENDO WII CONSOLE

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(Received November 14, 2015, accepted November 28, 2015)

ABSTRACT

The purpose of this study was to determine the accuracy of the calorie expenditure of a popular exergame, EA Sports Active, on the Nintendo Wii game console. The goal is confirm or dispute my hypothesis of the Nintendo Wii not being accurate when computing calories burned while playing the exergame, EA Sports Active. Twenty subjects were asked to perform two different intensities of exercise on the EA Sports Active game on two different occasions. During which oxygen uptake was collected continuously via Parvo Medics True One Metabolic Cart, from which expended calories were calculated then compared to the game's estimated calories burned. Data was analyzed by using a dependent T-test with significance set at a $p < 0.05$. No significant differences were found between the EA Sports Active estimated calorie expenditure and the actual calories measured by the metabolic cart. For the light intensity, the measured calories burned had a mean of 73.79 (SD = 20.58), while the exergame predicted a mean of 75.58 (SD = 15.45) ($p = 0.6218$). For the heavy intensity, the measured calories burned had a mean of 101.5 (SD = 28.6), while the exergame predicted 109.54 (SD = 23.96) ($p = 0.1531$). The results of this study disputes my hypothesis of the Nintendo Wii being inaccurate at determining calories expended. Thus, participants using the game can confidently use the stated calories burned as a measurement of their fitness program.