Exploring the Moderating Effect of Wearable Device Usage on Youth Sport Participation

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Facilities/Events - Event Marketing (Physical Activity) Friday, May 31, 2019
20-minute oral presentation (including questions) 8:30 AM
Abstract 2019-154 Room: Napoleon D1

World Health Organization addresses physical inactivity as a prevalent health problem in adolescence stage, but many young adolescents do not devote themselves to a healthy lifestyle (Centers for Disease Control and Prevention [CDC], 2018). CDC concerns that this paucity of activities in early adolescence stage often affects their health condition and psychological well-being. In recent years, self-monitoring wearable devices (WD) have emerged as an effective tool for increasing children’s physical activity level (Ridgers et al., 2016). However, most studies have concentrated on the impact of wearables on children’s mental and physical development (Hayer et al., 2015; Schaefer et al., 2016).

Sullivan and Lachman (2017) adopted the social cognitive theory in order to address the idea that WD can change health-related behaviors by providing users with task recognition and self-regulation. As a self-regulatory device for young adolescents, WD can promote a change in lifestyle and long-term attitude toward health. However, a few research questions remain: (1) How frequently do youth engage in sport events? (2) What role does WD play in youth’s sports participation? This study hypothesizes that: the behavioral involvement in casual exercise has H1) a positive influence on behavioral involvement in event-related sports and H2) a behavioral involvement in other sports. In order to examine the impact that WD has on adolescents’ sports participation, this study also hypothesizes that WD has a moderating effect on each relationship (H3-H4).

Method and Results

Data were collected from parents (spectators) of three youth sport events. A total of 355 valid responses were analyzed to examine the relationship between their children’s WD usage and behavioral involvement in casual exercise, event-related sports, and other sports activities. SPSS and AMOS were utilized to test descriptive statistics, path analysis, and multi-group method using a chi-square difference test. Less than one-third of the children have used the device (n=103, 29.0%), while 69% (n=245) have not owned the device. The path analysis revealed casual exercise has positive influence on event-related sports ($\beta=.17$, $p<.01$) and other sports ($\beta=.22$, $p<.001$). Moderation analysis showed that casual exercise frequency positively influenced sport event related frequency for the youth who used a device ($\Delta x^2(1)=14.628$, $p<.001$) (H3 supported). However, casual exercise frequency did not influence participation frequency in other sports whether youth owned a WD or not ($\Delta x^2(1)=1.29$, $p>0.05$) (H4 not supported).

Discussion

This study revealed an effect of WD on sport event related participation activities that extends beyond the propositions of previous studies, which primarily focused on the outcome effects of WD on children’ mental and physical development. The moderating effect of the WD provides evidence about the potential of using a WD as a stimulus to increase children’ participation in sport events. Therefore, it merits further exploration across more youth participants and events. Future studies can also explore youth’s psychological responses to the WD and its impact on overall quality of life using a longitudinal design.