I Always Feel Like…Somebody’s Watching Me: Digital Trackers and Physical Activity

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Among children from racially marginalized communities, there exists a gap in levels of physical activity. For instance, African-American youth are physically active at a significantly lower level than their White counterparts, whereas youth from low socioeconomic communities participate in sport and physical activity at nearly half the rate of children from wealthier communities (Aspen Institute, 2015). This is critical given that a youth’s socioeconomic standing impacts his or her levels of physical activity, which in turn impacts their health. The health benefits of physical activity include building and maintaining healthy bones and muscles, life longevity, improved physiological and psychological well-being, and reduced risks of some cancers, obesity and cardiovascular and other chronic diseases (CDC, 2011a, 2015a, 2015b). These risks may be further heightened by gender considering female high school students participate in the recommended daily amount of physical activity at a rate half that of male students (CDC, 2015b).

As demonstrated above, regular physical activity and participation in sport can have physical and emotional health benefits, as well as improve psychological well-being (CDC, 2015a). Technology-efficient and wearable electronic devices have become popular methods to track and document one’s daily activities and lifestyle behaviors, particularly focusing on health and physical activity (Bice, Ball, & McClaran, 2016; Schaefer, Ching, Breen, & German, 2016). However, little is known about how these devices are perceived and utilized by youth in low socioeconomic communities (Schaefer et al., 2016), a demographic particularly at-risk for low levels of physical activity (Aspen Institute, 2015). Thus, the purpose of this study is to determine the potential impact of movement and activity trackers on the physical activity levels of racially and economically marginalized youth participants in a sport-based youth development program.

The U.S. Department of Health and Human Services Centers for Disease Control and Prevention (CDC) recommends 60 minutes or more per day of aerobic activity, with at least three days each week to include, at minimum, activity of moderate or vigorous intensity (CDC, 2011a). However, there are many obstacles that potentially limit children’s opportunities to reach such goals. Social influence, lack of motivation, and lack of resources (CDC, 2011b) are barriers commonly referred to in discussions of why low-income youth participate in sport and physical activity at such low levels, and are of particular interest to this study.

Self-Determination Theory (SDT) has been utilized to research intrinsic motivation (or lack thereof) as well as extrinsic and sociocultural factors that contribute to the healthy behavior, well-being and psychological development of individuals (Ryan & Deci, 2000). Psychological determinants, such as competence, relatedness, and autonomy can influence one’s engagement in physical activity (Bice et al., 2016). Likewise, technology (e.g., video games, activity monitors) has been researched as an influential factor on one’s level of physical activity (Bice et al., 2016; Martin, Ameluxen-Coleman, & Heinrichs, 2015). Thus, SDT will provide the theoretical framework for the current study’s analysis of the potential impact of digital activity trackers on one’s movement and participation in physical activity and sport.

Data will be collected from the participants of an after-school sport-based youth development program focused on utilizing tennis and sport sampling to assist in the development of character and life skills of its participants. Participants hail from schools in low-income communities, in which fewer than 25% of the Black students earned a satisfactory score in the state’s assessment of English Language Arts (ELA), Reading, and Mathematics abilities. Comparatively, over 75% of their White counterparts scored satisfactory or higher (Florida Department of Education, 2014).

Twenty Fitbit Zips are currently on backorder and will be utilized to collect data. Thus, this submission is a work in progress as data collection has yet to commence. Participants will wear the digital trackers three days a week during
the duration of the program. The Fitbit Zip will track participant activity, including number of steps taken, distance traveled, and calories burned. Participants will complete Pelletier et al.’s (2013) Sport Motivation Scale II (SMS-II) at the beginning (pre) and end of the program (post). At the conclusion of the program, participants will be asked to reflect on their experiences by taking part in a focus group; the questions of which will be derived from Schaefer et al.’s (2016) study on the feasibility of fitness tracking with urban youth. Daily curriculum, programming, and activities will also be documented.

Wearing the activity trackers will allow the researcher to compare activity and movement levels from the individual perspective, as well as between groups and on a week-by-week basis. Paired samples t-tests will be run to analyze data regarding the potential change over time on participant scores from the SMS-II. A multivariate analysis of variance (MANOVA) will be utilized to determine any potentially significant differences in steps taken, distance traveled, calories burned, and SMS-II (post) scores based on whether or not the participant was wearing the Fitbit Zip. Potential differences among participants of different genders will also be studied. The analysis of focus group data will align with the coding strategies (i.e., open, axial, and selective) of constant comparative methodology (see Onwuegbuzie, Dickinson, Leech, & Zoran, 2009).

The findings are expected to contribute to the current sport and youth development literature by further understanding sport and physical activity motivation. It is critical to better understand how to motivate racially and economically disenfranchised youth to participate in sport and physical activity, as they are susceptible to lower levels of physical activity, resulting in a negatively disparate impact on their health and health behaviors (Aspen Institute, 2015; CDC, 2011a, 2015a, 2015b; McKinsey & Company, 2009). Also of interest to this study is the potential effectiveness of movement and activity trackers on motivation and physical activity levels. Despite the recent popularity of these trackers to document daily physical activity and health behaviors (Bice et al., 2016), little is known about how they might be perceived and utilized in low socioeconomic communities (Schaefer et al., 2016). The findings from this study will advance knowledge in this area as well. Having a better understanding of the perceptions of, along with the motivation to, participate in sport and physical activity among racially and economically marginalized youth will afford researchers and practitioners an evidence-based foundation on which to design appropriate studies, as well as program offerings and curriculum.

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