Motivational Effects of Physical Activity Monitoring Bands and Talking Pedometers on Children with Visual Impairments

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Previous research demonstrates that individuals with visual impairments (VI) are at risk for health-related illnesses attributed to inactivity and low fitness as well as a compromised quality of life. Few studies have examined the use of physical activity (PA) monitoring devices on PA motivation in general, particularly in children, adolescents, or in individuals with VI. **PURPOSE:** To determine the motivational factors of two popular fitness bands and talking pedometers on the PA of youth with VI. **METHODS:** Participants consisted of 20 children (13 males, 7 females, M_{aqe}=12.65±2.26) and 5 counselors-in-training (3 males, 2 females, M_{aae}=18.40±2.06) with VI. During a weeklong developmental sports camp for youth with VI, participants were placed in groups of 5. One group per day wore the two fitness bands and a talking pedometer throughout the day. Focus groups were conducted at the end of each day; the sessions were recorded, transcribed, coded, and then analyzed using NVivo 10. Participants were asked questions based upon the social-ecological model (SEM) in order to discern, relative to these exercise devices, various motivators behind PA at the intrapersonal, interpersonal, and community levels. Questions asked in the groups related to the participants' familiarity with the devices, ease of use and access to data, understanding of the data, interpersonal benefits of using these devices, and suggested changes to the devices. **RESULTS:** Recurring themes included modifications to the devices to make them more user-friendly and motivational, the incentive they offered to compete with peers or set PA goals, and specific aspects of the devices (such as the social media aligned with them, PA measures, and displayed data) that encouraged the participants to be more active on various SEM levels. **CONCLUSION:** All three PA-monitoring devices had differing aspects that improved motivation for PA in this population. In addition, many suggestions were made for improvements on these devices that would further motivate PA in this population and allow for greater ease-of-use.

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