Exploring the Physical Activity Behavior and Needs of Adolescent Girls: A Mixed-Methods Study

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Abstract: Despite the well-established health benefits of physical activity (PA), most adolescents do not meet guidelines recommending 60 minutes of moderate to vigorous physical activity (MVPA) each day. Adolescent girls engage in less PA than boys, a difference that increases with age. By the 9th grade, only 20% of girls report meeting recommendations for PA with lower percentages for black and Hispanic girls compared to white girls. The purpose of the study was to explore the physical activity (PA) behavior and needs of adolescent girls. Study aims included assessment of adolescent girls' PA behavior; facilitators of and barriers to PA, PA needs, and acceptability of the Fitbit-Flex 2 activity tracker. This exploratory study used a qualitative and quantitative approach. The qualitative approach involved a focus group using a semi-structured interview technique. PA was measured using the Fitbit-Flex 2 activity tracker. Steps, distance, and active minutes were recorded for one week. A Fitbit survey was also administered to assess acceptability. SPSS Version 22.0 and ATLAS.ti Version 8 were used to analyze data. Girls in the ninth grade were recruited from a high school in the Midwest (n=11). Girls were excluded if they were involved in sports or other organized $PA \ge 3$ days per week, had a health condition that prevented or limited PA, or could not read and write English. Participants received a Fitbit-Flex 2 activity tracker to wear for one week. At the end of the week, girls returned the Fitbit and participated in a focus group. Girls responded to open-ended questions regarding their PA behavior and shared their ideas for future intervention efforts aimed at increasing PA among adolescents. Girls completed a survey assessing their perceptions of the Fitbit. Mean age of the girls was 15.3 years (SD=0.44). On average girls took 6,520 steps and walked 2.73 miles each day. Girls stated their favorite types of PA were walking, riding bike, and running. Most girls stated they did PA for 30 minutes or more at a time once a day or every other day. The top 3 facilitators of PA reported by girls were friends, family, and transportation. The top 3 barriers included health issues, lack of motivation, and weather. Top intervention ideas were community service projects, camps, and using a Fitbit activity tracker. Girls felt the best timing of a PA program would be in the summer. Fitbit survey results showed 100% of girls would use a Fitbit on most days if they had one. Ten (91%) girls wore the Fitbit on all days. Seven (64%) girls used the Fitbit app and all reported they liked it. Findings indicate that PA participation for this sample is consistent with previous studies. Adolescent girls are not meeting recommended daily guidelines for PA. Fitbit activity trackers were positively received by all participants and could be used in future interventions aimed at increasing PA for adolescent girls. PA interventions that take place in the summer with friends and include community service projects may increase PA and be well received by this population.

Keywords: adolescents, girls, interventions, physical activity

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