

Physical activity of school-age children at Play Streets in rural communities



The Issue

Child physical activity is important for many health outcomes, yet few children are active enough to realize these benefits. Children of color and those residing in low-income communities face even greater challenges to engaging in recommended levels of physical activity. Children play outside less than their parents did at the same age. Residents of rural communities may face obstacles to being active, including fewer parks, playgrounds, and programs and greater geographic dispersion.

Play Streets, temporary street closures that create safe places for children to play, could be an innovative solution to promote active play in rural communities. The purpose of this study was to examine physical activity of school-aged children during Play Streets that occurred in Summer 2017 in four low-income rural communities of different races and ethnicities.



Results

Perceptions and participant characteristics

- ✓ Most school-aged children who attended the Play Streets reported it was their first time.
- ✓ Children agreed or strongly agreed that their town has friendly (safe/attractive) places to walk and/or bike.
- ✓ Almost all children (96%) agreed or strongly agreed they felt safe at a Play Street.
- ✓ Over half of the children (59%) said they were physically active in their free time quite often (5-6 times last week) or very often (7 or more times last week) during the last week before the Play Street.
 - ◇ Physical activity was described in this question as including sports or dance that make you sweat or make your legs feel tired, or games that make you breathe hard, like tag, skipping, running, climbing, and others.
- measure their physical activity, an average of 23 children at each Play Street.
- ✓ Children who wore pedometers were on average 9 years old and 55% were female.
- ✓ Children wore the pedometers for an average of 93 minutes, with 42 steps per minute or 3,906 steps overall, while wearing the pedometer.
 - ◇ For context, existing studies show that children of varying ages accrue on average 918-1,943 total steps while in 15-29 minutes of recess.
- ✓ There were no statistically significant differences in steps per minute between boys and girls.
- ✓ When examining differences between boys and girls by age category, there were no significant differences between boys and girls for age groups other than 12-15 year-olds.
 - ◇ Boys aged 12-15 years recorded significantly greater steps per minute than girls and wore the pedometers longer on average.

Physical activity at Play Streets – Pedometer measured

- ✓ A total of 372 elementary-to-middle school-aged children wore pedometers at the Play Streets to



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Physical activity at Play Streets – Systematic observation measured

- ✓ Roughly half of all children observed were physically active at the Play Street (49%).
 - ◇ There was no significant difference in boys versus girls on physical activity except for male teens who were more likely to be physically active than female teens.
 - ◇ Overall, children were also more likely to be physically active than teens.
- ✓ Areas containing inflatables (e.g., bounce houses, inflatable obstacle courses) had the highest percentage of physically active children.
- ✓ Male children were significantly more likely to be observed in sport court and field activity areas than female children; although both males and females present in a sport court or field activity area were mostly active.

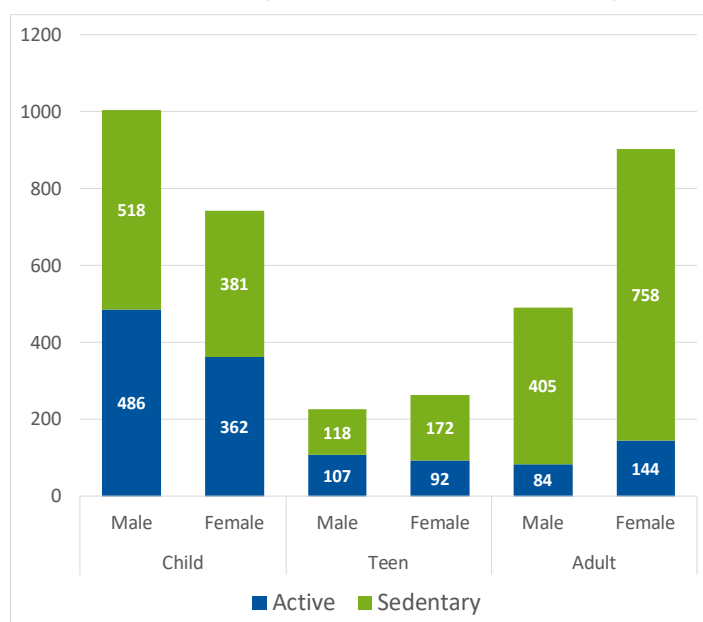


Implications

Play Streets can provide children in diverse rural communities a place to actively play safely and be physically active.

- ✓ Children who participated in a full 3-hour Play Street could achieve over half the recommended daily steps.
- ✓ Total steps achieved during a Play Streets well exceeded the number of steps children achieve during recess due to the lengthier duration of Play Streets as compared to recess, with steps per minute being similar to several studies of children during recess.
- ✓ The typical differences between boys' and girls' physical activity were not found.
- ✓ Our findings suggest that Play Streets are one strategy to promote physical activity among school-aged children in diverse low-income rural communities that lack access to safe opportunities to be physically active.

Active and Sedentary Individuals Present at Play Streets





Methodology

In the summer of 2017, four community organizations (church, local health department, county extension office, and a tribal health center) in four different diverse low-income rural communities received mini-grants (\$6,000) to implement four three-hour Play Streets each for a total of 16 Play Streets across the summer.

Communities and organizations were selected to represent various racial/ethnic populations (African American, American Indian, Latino, and Non-Hispanic White).

Play Streets were evaluated in three ways:

1. Surveys of children who attended Play Streets designed to collect basic demographic information, perception of the community and community physical activity spaces, whom the child attended the Play Streets with, and day-to-day physical activity behaviors;
2. Pedometers were used to measure the amount of steps children took while at Play Streets;
3. Systematic observation of physical activity using the System for Observing Play and Recreation in Communities (SOPARC) was used to understand which activity areas of the Play Streets were used and whether children were sedentary or physically active while in each of these activity areas.

Researchers observed all activity areas six times starting every 30 minutes throughout the duration of each Play Street. In each of these observations individuals in an activity area were counted, noting their sex, age category, and level of physical activity (sedentary or physically active).

Results represent all observations made, which may include individuals more than once, since people move fluidly from activity area to activity area during a Play Street. Researchers observed 1,750 children and 489 teens across all 16 Play Streets.



Play Street hosted by Texas A&M AgriLife Extension Service of Milam County in Cameron, TX.
Photos by Renée Umstattd Meyer.

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