Making a Difference: Saskatchewan Health Research With Impact

Designing Cities with children in mind

**The Issue**

Childhood inactivity is a major concern in Saskatoon and across Canada. One important influence on kids’ activity levels is the way we design our cities—our neighbourhoods, buildings, roads, and all the structures within them.

“More compact, high-density, pedestrian-friendly urban design, which makes it reasonably easy to get to school, recreational facilities or playgrounds, can encourage kids to be more active,” says Nazeem Muhajarine, a social epidemiologist at the University of Saskatchewan (U of S).

Muhajarine is head of community health and epidemiology at the U of S and director of the Saskatchewan Population Health and Evaluation Research Unit (SPHERU), where he also leads the Healthy Children research program.

**The Research**

To understand the relationship between the built environment and children’s activity levels, Muhajarine conducted a three-year study with collaborators including ones from the U of S, public and Catholic school boards, and Saskatoon Health Region. The Smart Cities Healthy Kids study was funded by the Canadian Institutes of Health Research, Heart and Stroke Foundation, and the Health Research Foundation from 2009 to 2012.

Research team members walked through all 60 residential neighbourhoods in Saskatoon to assess their active living potential using a standardized survey. They surveyed 1,610 children in grades 5 to 8 about their physical activity levels, and had 465 of these children wear accelerometers – small, waist-mounted devices that capture movement in any direction and record it for analysis – for up to a week to objectively measure their activity levels. Finally, 24 of these children and their parents were interviewed separately about what encouraged or discouraged them from being active.
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THE RESULTS

“We found that children got more than twice as much physical activity from free play as they did from registered activities like soccer and hockey. Girls were found to be less active than boys, and children aged 13-14 were less active than 10 year olds,” Muhajarine says. “Children were also more active during the week than they were on weekends, and the poorer the neighbourhood they lived in, the less activity they got.”

Children were more active in neighbourhoods that used a grid design. These neighbourhoods provided the most locations, in both number and variety, that children could walk to by themselves. While they found newer neighbourhoods designed with curved streets and dead ends were the safest from both crime and traffic, children living in them were the least active as it was harder to get places walking or biking.

THE IMPACT

To share the study’s findings, the research team has made numerous presentations to city planners, educators, health region staff, city residents, and other stakeholders. They created reports for participating schools, and launched a website, www.smartcitieshealthykids.com, to share reports, fact sheets and videos widely.

“What we have learned has informed current urban design projects in Saskatoon, such as the new U of S College Quarter development,” says Muhajarine. “We are approached frequently for advice on designing projects with children in mind.”

THE FUTURE

Muhajarine and his team continue to explore the impact of the built environment, with studies on Saskatoon’s food environment, and an evaluation of the impact of the Good Food Junction on families’ access to healthy foods in Saskatoon’s core neighbourhoods.

Muhajarine is also the U of S lead for a major SPHERU study on reducing health inequalities in vulnerable populations, awarded by the Saskatchewan Health Research Foundation.

“It’s wonderful to know that our research has made a difference in people’s lives, even in a small way,” says Muhajarine.