Medical Xpress

Psychologist uses Google map technology in study of neighborhood effects

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Where children live could determine their weight, chances of becoming crime victims and even lifespan, according to recent findings in the emerging field of "neighborhood effects."

Researchers are trying to understand how community factors influence health and behavior. For example, people who grow up in neighborhoods without a safe place to play are more likely to be obese, according to UC Irvine psychologist Candice Odgers, and residents near parks or green space tend to have lower levels of anxiety and depression.

Odgers and colleagues at Duke University and Harvard University involved in the Community Strengths Longitudinal Neighborhood Study are assessing locale-related effects on 2,232 twins and their families in Great Britain. And they're employing a novel method to identify these factors: Google Earth and Street View.

Aerial perspectives allow the researchers to easily distinguish and quantify green space, while Street View lets them stroll remotely down a roadway and zoom in on decay and disorder, such as rundown buildings, vacant lots, graffiti, garbage and broken bottles.

"We're working with Google's Street View team in Europe to virtually code local neighborhoods," says principal investigator Odgers. "This technology is a really cost-effective way to get a more complete picture of what's happening there."

More than a decade ago, a research team led by study collaborator Robert Sampson, of Harvard, drove around Chicago to systematically videotape many of these same community features.

“Now we can take a virtual walk in the children’s neighborhoods from anywhere in the world for a fraction of the cost,” Odgers says.

The study is funded through Google’s Faculty Research Awards program, which draws about 30,000 international applicants each year and fosters ties between the company and academia.

“We’re proud to support research that uses technology like Street View to help solve real-world problems,” says Jen Phillips, university relations program manager at Google, “and we’re looking forward to seeing the impact of Professor Odgers’ work.”

The Community Strengths Longitudinal Neighborhood Study aims is to create “community health profiles” that could begin to explain gross disparities in child health across neighborhoods and help governmental and nonprofit agencies allocate resources judiciously.

The project is part of the larger Environmental Risk Longitudinal Twin Study, led by Louise Arsenault, Avshalom Caspi and Terrie Moffitt, which tracks children from birth to adolescence. Researchers are collecting genetic, socioeconomic, familial, scholastic and nutritional data to determine how early exposure to adversity affects mental and physical well-being.

“We know that genes, family and peers can have an impact on children’s lives,” Odgers says, “but the Community Strengths and E-Risk studies allow us to go deeper into how these factors work together and understand how the neighborhoods we live, work and play in can influence our health and behavior.”

Provided by University of California, Irvine