Medical Xpress

Cell phones to provide picture of human interaction

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(PhysOrg.com) -- Cell phones to their ears, a team of research participants will report their interpersonal interactions in real time to provide a better view of human behavior thanks to a $1 million grant from the National Institute of Aging as part of the National Institutes of Health's American Recover and Reinvestment Act funding.

Participants will submit data after every significant interaction lasting five minutes or longer, for three straight weeks. The Penn State researchers want a detailed description of how emotions, physical health and personal interactions affect each other throughout the day.

The study will reach new heights in data collection frequency and test new data collection technology. Rather than fill out questionnaires, which can be tedious, participants will submit data via smart phones with touch screen displays and an application that prompts them with questions on the spot. This will allow participants to reflect on their interactions within minutes.

Studies that collect data once per day, or less, rely on participants' memories that can be inaccurate. In contrast, the data collected in this study should capture a more accurate and detailed "moving picture" of people's lives, said Nilam Ram, assistant professor of human development and family studies, Penn State, and principal investigator of the study.

"We're hoping to develop technology that can be used to better

understand the intricacies of human behavior," Ram said.

Participants will be reporting on their perceptions of health including their general, cardiovascular and gastrointestinal health; emotions including whether an interaction made them feel angry, happy, sad, etc., and interpersonal behavior including actions they engaged in during the interaction and whether they perceived the other person as cold or friendly, dominant or submissive.

Ram and his research team will also apply new statistical techniques that they hope will better describe the variability in individuals' behaviors.

"Current analytical approaches require us to make strong assumptions about people," said Ram. "For instance, no family has 2.3 children, but that's the average we always hear about and use as the basis for predicting behavior. The statistical methods we're developing should help tailor theories so that they more accurately describe individuals and their own unique idiosyncrasies. So we should be able to say, 'this family has three children' or 'this family has no children.'"

Ram hopes that these approaches will eventually be able to refine existing prevention programs, such as those used to help people overcome addictions.

"If we can see patterns in an individual's behavior -- for instance, if a person automatically goes for a drink when something stresses them out -- we might be able to tailor messages to his or her specific pattern and head them off or at least shift them onto a path that will promote more positive, healthy growth," says Ram.

Provided by Pennsylvania State University (news : web)

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