Most people call it the "art" of persuasion, but public health researchers at the University of Southern California (USC) are trying to pinpoint the "science" behind social influence.

They hope a better understanding of human interactions - both face-to-face and online - can help prevent disease and promote general health.

Whether the goal is to curb smoking at a local school or to reduce the spread of sexually transmitted diseases within a community, it is important to understand the social structure of the group and the dynamics of influence at play, says Thomas W. Valente, Ph.D., professor of preventive medicine at the Keck School of Medicine of USC.

"If I want to go into a high school and change physical activity or other obesity behaviors, I have to understand there are cliques and subgroups of students that exhibit different risks," Valente said. "I would design different interventions for the different groups. We constantly are concerned about how ineffective our interventions are - this is a big reason why those interventions are not working. We can do a much better job promoting healthy behaviors if we understand the social network contexts and design these interventions with those cues in mind."

Valente, whose research focuses on social networks and influence, has compiled a collection of methods that public health advocates use to stimulate changes in behavior and explains why certain methods may be more effective than others in particular situations. The analysis appears in the July 6 edition of the peer-reviewed journal Science, the world's leading outlet for scientific news, commentary and research.

Due to the large number of interventions available to researchers - Valente identifies 24, each with at least several variations - the researcher says a more robust framework is needed for deciding which tactics are best used in particular settings.

Word-of-mouth interventions, for example, depend on the social network to succeed. In some cases, word of mouth is used to spread the word and in other cases to create groups of like-minded friends.

"Existing evidence indicates that network interventions are quite effective," Valente writes. "Yet, the science of how networks can be used to accelerate behavior change and improve organizational performance is still in its infancy. Research is clearly needed to compare different network interventions to determine which are optimal under what circumstances."

Valente notes that behavioral research is often used in marketing and business arenas; the public health sector is just beginning to implement that information as tools like Facebook and Twitter have made it easier to collect data and spread information, he says.


Provided by University of Southern California

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