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Happiness is contagious, research finds

A study of the relationships of nearly 5,000 people tracked for decades in the Framingham Heart Study shows that good cheer spreads through social networks of nearby family, friends and neighbors.

By [Karen Kaplan](#)
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They say misery loves company, but the same may be even truer of happiness.

In a study published online today in the British Medical Journal, scientists from Harvard University and UC San Diego showed that happiness spreads readily through social networks of family members, friends and neighbors.

Knowing someone who is happy makes you 15.3% more likely to be happy yourself, the study found. A happy friend of a friend increases your odds of happiness by 9.8%, and even your neighbor's sister's friend can give you a 5.6% boost.

“Your emotional state depends not just on actions and choices that you make, but also on actions and choices of other people, many of which you don't even know,” said Dr. Nicholas A. Christakis, a physician and medical sociologist at Harvard who co-wrote the study.

The research is part of a growing trend to measure well-being as a crucial component of public health. Scientists have documented that people who describe themselves as happy are likely to live longer, even if they have a chronic illness.

The new study “has serious implications for our understanding of the determinants of health and for the design of policies and interventions,” wrote psychologist Andrew Steptoe of University College London and epidemiologist Ana Diez Roux of University of Michigan in an accompanying editorial.

Christakis and UCSD political scientist James H. Fowler examined the relationships of nearly 5,000 people who were tracked for decades as part of the landmark Framingham Heart Study.

They discovered that happy people in close geographic proximity were most effective in spreading their good cheer. They also found the happiest people were at the center of large social networks.

In many regards, they concluded, happiness is like a contagious disease.

“We know people who are most susceptible to HIV are people who have lots of partners,” Fowler said. “This is the same thing.”

This isn't the first evidence that emotions can spread like a virus. Studies have found that waiters who offer service with a smile are rewarded with bigger tips. On the flip side, having a mildly depressed roommate made college freshmen increasingly depressed themselves.

Fowler and Christakis thought they could document the spread of happiness more convincingly by studying the copious records of participants in the Framingham study, a massive effort launched by the National Heart, Lung and Blood Institute in 1948 to find common causes of cardiovascular disease. Participants gave researchers the names of their parents, spouses, siblings, children and close friends, including many who were also study volunteers. That allowed the researchers to track multiple relationships for each participant out to several degrees of separation.

Fowler and Christakis focused on 4,739 people who were part of the second-generation cohort that joined the study in 1971, in part because many of them had parents and children in other cohorts. The researchers rounded out their networks by using home addresses to locate neighbors and employment information to identify co-workers. Altogether, they constructed a social network that included 12,067 study volunteers who were linked to each other through 53,228 ties.

In earlier studies of the network, Fowler and Christakis showed that obesity and smoking spread among groups of friends and relatives.

To assess happiness, the researchers relied on how much the volunteers said they agreed with four statements like “I was happy” and “I enjoyed life.” The questions were asked three times between 1983 and 2003.

The results were striking:

A happy friend who lives within a half-mile makes you 42% more likely to be happy yourself. If that same friend lives two miles away, his impact drops to 22%. Happy friends who are more distant have no discernible impact, according to the study.

Similarly, happy siblings make you 14% more likely to be happy yourself, but only if they live within one mile. Happy spouses provide an 8% boost – if they live under the same roof. Next-door neighbors who are happy make you 34% more likely to be happy too, but no other neighbors have an effect, even if they live on the same block.

“We suspect emotions spread through frequency of contact,” Fowler said. As a result, he said, people who live too far away to be seen on a regular basis don't have much effect.

The one exception was co-workers, perhaps because something in the work environment prevented their happiness from spreading, the study found. The research was funded by the National Institute on Aging and the Robert Wood Johnson Foundation.

Shigehiro Oishi, a University of Virginia psychologist who studies the causes and consequences well-being, said the importance of geography was a profound finding.

“Although we are connected with friends and family members who live far away via cellphone and the Internet, these results indicate that there is nothing like a face-to-face interaction,” Oishi said. “We are told to get connected by cellphone companies, but in order to get connected you really have to live close by and interact face to face.”

Fowler and Christakis said they didn’t know the mechanism by which happiness spreads. One possibility is that happy people spread their good fortune directly by being generous with their time and money. Evolution may have encouraged infectious happiness if it helped hominids and early humans enhance their social bonds so they could form successful groups, the researchers said.

UC Irvine sociologist Katherine Faust, who studies social networks, said the study might overstate the role of social ties in transmitting happiness. Many of the Framingham volunteers are the parents, siblings and children of other volunteers, and their propensity toward happiness could be grounded in their genes, she said.

But Richard Suzman, director of behavioral and social research at the National Institute on Aging, said Fowler’s and Christakis’ work was persuasive enough to force policymakers to rethink the importance of social ties when contemplating happiness or obesity or smoking.

“You can’t just treat individuals; you have to treat networks or communities,” he said.

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