

Your Facebook friendships may influence your heart health

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Places with higher rates of economic connectedness—linkages between people of lower and higher socioeconomic status as indicated by Facebook friendships—had significantly lower rates of premature death

related to heart disease, according to a study presented at the American College of Cardiology's Annual Scientific Session Together With the World Congress of Cardiology.

Previous studies have shown that poverty or [low socioeconomic status](#) increases a person's risk of [heart disease](#) and premature death. This new study is the first to assess [health outcomes](#) using Facebook friendships as a metric for economic connectedness.

Its findings suggest that being connected with people of higher-than-median socioeconomic status, as measured via a multifaceted machine learning algorithm based on individual and neighborhood-level Facebook data, could help to lessen the effect of poverty on health and potentially help predict individual health risks or inform efforts to improve health at the community level.

"Social networks are important for health outcomes," said Tabitha Lobo, MD, an internal medicine resident at University Hospitals Cleveland Medical Center and the study's lead author. "Mechanisms to improve social networks could be established through youth mentorship programs, internships or school-based programs for connecting people, and these may have long-lasting effects on neighborhood characteristics with respect to [cardiovascular mortality](#)."

Researchers estimated economic connectedness at the neighborhood level across the U.S. by adapting a method recently developed to estimate the proportion of Facebook users in a specific area who have a large number of Facebook friendships with people of a higher socioeconomic status than themselves.

The method tracked friendship status only and did not capture the level of engagement via posts or messages. Neighborhoods with more highly connected individuals were considered to have high economic

connectedness, while neighborhoods where people had fewer connections to those of higher socioeconomic status were considered to have low economic connectedness.

Researchers compared neighborhood-level economic connectedness data with rates of premature death from heart disease at the county level. To assess rates of [premature death](#), they analyzed records from over 900,000 deaths among people between the ages of 25-65 that occurred between 2018-2020 and listed heart disease as an underlying cause of death.

The results found that places with higher economic connectedness tended to have lower rates of premature cardiovascular death, a pattern that held true both nationally and regionally. After adjusting for race, sex, social vulnerability scores (a metric capturing a community's ability to prevent human suffering and financial loss in a disaster) and county-level risk factors, social media-derived economic connectedness was estimated to explain 57% of the inter-county variability in premature cardiovascular death rates.

While more research is needed to understand the factors at play, researchers said that this social media-based metric of economic connectedness may help to quantify a person's opportunity for economic growth.

Relationships with people of a higher socioeconomic status, whether in person or online, could improve a person's awareness of and access to educational opportunities, job opportunities, heart-healthy lifestyle habits and other benefits, with implications not only for economic prospects but also long-term health outcomes. The findings suggest that economic connectedness derived from social media could be a useful metric for predicting heart disease risk and designing interventions to improve health, researchers said.

"If we can predict a person's risk, we can use that information to guide medical treatments," Lobo said. "Traditionally, we've focused on individual-based interventions, but this gives us the opportunity to work at more of a community level, for example, by giving policymakers information to improve the overall health of a community and not just focus at an individual level."

One limitation of the study is that the economic connectedness metric only includes people who have Facebook accounts, and the degree to which the economic connectedness of Facebook users compares to the connectedness of the general population is unknown.

Recent reports estimate that about 70% of U.S. adults use Facebook, with younger and middle-aged adults using the platform most frequently and teens and older adults using it less. Researchers also said the Facebook-based metric for economic connectedness is still new and has not yet been comprehensively validated or compared to other metrics used to understand economic growth potential.

More information: Conference:

www.expo.acc.org/ACC23/Public/Enter.aspx

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