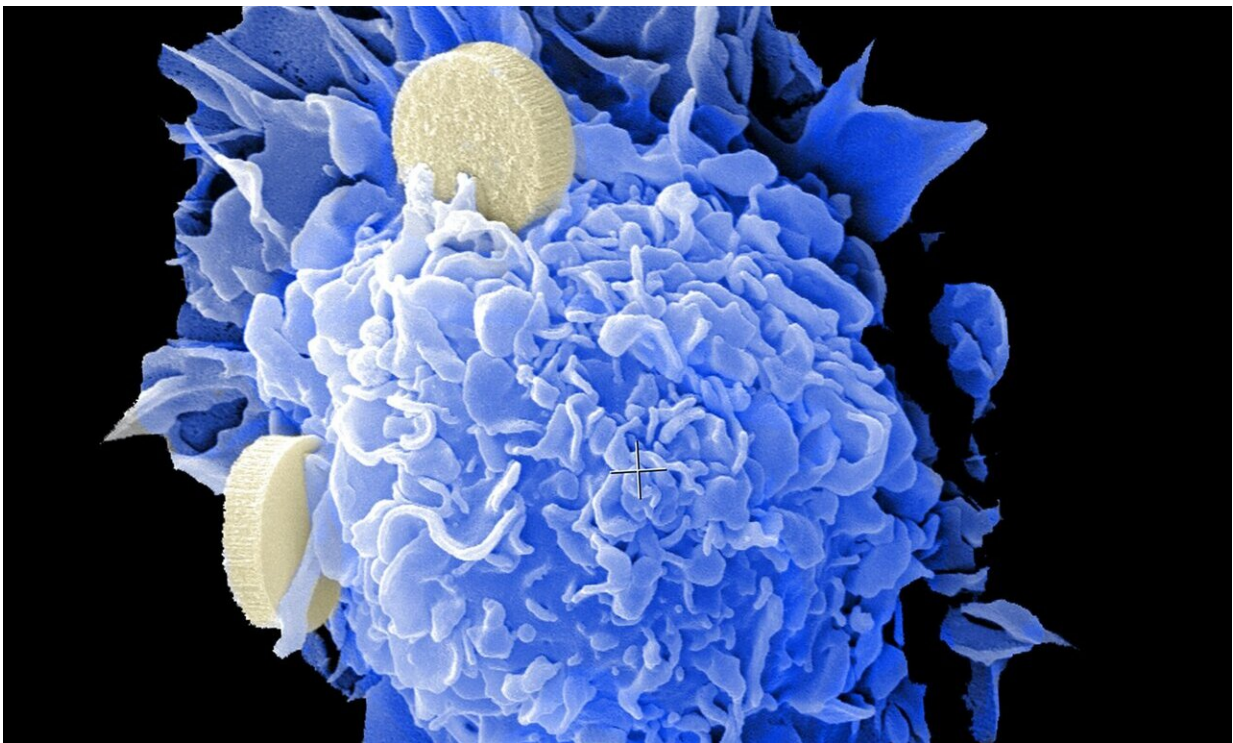


Rural residents tend to hold fatalistic beliefs, perceive more cancer-related information overload than urban residents

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Compared to U.S. urban adults, rural adults were more likely to think fatalistically about cancer and feel overwhelmed by information about cancer prevention, according to results published in *Cancer*

Epidemiology, Biomarkers & Prevention, a journal of the American Association for Cancer Research.

Adults living in [rural areas](#) have less access to health care infrastructures and experience a disproportionate burden from a variety of diseases, including cancer, compared to their urban counterparts, said Jakob Jensen, Ph.D., study senior author, professor in the Department of Communication at the University of Utah, and member of the Huntsman Cancer Institute.

"Addressing this disparity is difficult on multiple levels, but perhaps most challenging is that rural adults often bypass [cancer prevention](#) and detection resources when they are made available. Trying to understand the reasons behind this behavior is a pressing task for cancer researchers," Jensen said. "Our research hypothesis was that beliefs and attitudes about cancer may be the underlying cause, and that rural adults might be more prone to negative beliefs about cancer, possibly as a way to cope with limited access and resources."

To assess whether cancer beliefs vary between rural and urban adults in the U.S., Jensen and colleagues analyzed the results of a survey conducted between 2016 and 2020 in 12 U.S. National Cancer Institute-designated cancer centers.

Using online and in-person survey instruments, the researchers surveyed 10,362 participants (3,821 rural and 6,541 urban) living in the service areas of these cancer centers. The fraction of rural respondents ranged from 5.7 to 82.6 percent, depending on the catchment. Participants were asked to rate four statements related to:

- prevention-focused cancer fatalism ("It seems like everything causes cancer" and "There's not much you can do to lower your chances of getting cancer");

- cancer information overload ("There are so many different recommendations about preventing cancer, it's hard to know which ones to follow"); and
- treatment-focused cancer fatalism ("When I think about cancer, I automatically think about death").

The response options included "strongly agree," "somewhat agree," "somewhat disagree," and "strongly disagree."

The researchers found that, compared to urban participants, rural participants in the study were significantly more likely to respond that they agreed or strongly agreed with all four beliefs, showing that rural populations exhibited higher levels of cancer fatalism and cancer information overload. In particular, rural participants were 29 percent more likely to agree that everything causes cancer, 34 percent more likely to agree that prevention is not possible, 26 percent more likely to agree that there are too many different recommendations about cancer prevention, and 21 percent more likely to agree that cancer is always fatal.

"Our findings are in line with previous research showing that this type of thinking might be a consequence of a wider cultural setup that fosters self-reliance and coping beliefs in response to stress and lack of resources. This is known as the psychological stress and coping theory," said Jensen. "The findings of our study are consistent with this logic as populations with fewer resources (in this case, rural adults) are more likely to reduce (fatalism) or revise (overload) the situation."

Jensen commented that, based on these observations, empathy could be the starting point for an effective communication approach, and that health communicators could engage rural populations by acknowledging these feelings.

The surveys also gathered a range of socio-demographic and behavioral variables including age, gender, race/ethnicity, income, education, employment status, primary source of health care coverage, marital status, cost barriers to medical care, and smoking status. In particular, lower education was associated with fatalism and information overload. According to the researchers, this might reflect differences in scientific literacy.

The study findings reveal conflicting feelings, the authors note, as participants seem overwhelmed by too many recommendations but, at the same time, they perceive cancer as a death sentence and feel there is nothing that can be done to avoid it. "New strategies to effectively integrate multiple recommendations at once would be helpful. Alternatively, the focus should be placed on one recommendation at a time," Jensen added.

Among the limitations of the study, the authors acknowledged that fatalism and information overload may not be exclusive to [cancer](#) and may affect the risk of other health conditions, such as heart disease and diabetes. In addition, the surveys were observational in nature, so they can suggest but not confirm the relationship between rural life, fatalism, and information overload. Furthermore, the data analyzed came from 12 catchment areas that, although representative, are only a subset of all rural populations in the U.S., and not all sites oversampled or stratified for rural/urban differences, which resulted in unequal sample sizes for this comparison. However, according to the authors, this had a small impact on statistical power, and the fact that rural/urban differences were observed for all four beliefs controlling for site minimized this concern.

More information: Jakob D. Jensen et al, Examining Rural–Urban Differences in Fatalism and Information Overload: Data from 12 NCI-Designated Cancer Centers, *Cancer Epidemiology Biomarkers &*

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