

# Link found between drought and HIV among women in less-developed countries

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Current research predicts that by 2025, 1,800 million people are expected to be living in countries or regions with insufficient water resources, and models show increased severity of droughts in years to come. Food insecurity and other consequences of droughts will become intensified, influencing disease vulnerabilities among populations in less-developed countries. New research from Kelly Austin, associate professor of sociology at Lehigh University, explores how droughts shape gender inequalities in the HIV burden, indirectly through increased food insecurity.

The paper, "Drying Climates and Gender Suffering: Links Between Drought, Food Insecurity, and Women's HIV in Less-Developed Countries," is published in *Social Indicators Research*.

This study builds on previous attempts to explain [women's](#) disproportionate share of global HIV cases through biological, cultural and socioeconomic inequalities by bringing the environment and climate-related disasters into the discussion.

"While many infectious diseases like HIV/AIDS do not have a direct link to the environment in their transmission patterns or vectors, disasters such as [drought](#) can still have a significant influence on the social conditions that shape and enhance vulnerabilities," said the researchers, adding that hunger and [food](#) insecurity are key factors motivating women's engagement in early marriage, commercial sex, transactional sex relationships, and other forms of risky sex

engagements.

Using a structural equation modeling approach, Austin and her colleagues were able to test the indirect and direct links between food insecurity and HIV as well as the causal chain of factors involving drought, food insecurity, and women's HIV.

The results from the study found that drought escalates food insecurity, and food insecurity has indirect, [negative impacts](#) on women's status, including lower participation in education, higher fertility rates and reduced access to medical care. Since women's status and the use of contraceptives are tightly linked, these impediments directly increase the percentage of HIV cases among women, confirming the researchers' hypothesis.

"Uncovering these mechanisms would not have been possible with more mainstream approaches," said Austin.

It's common to see strict gender norms in place where women are typically the household managers, carrying the responsibility for growing and harvesting food, collecting firewood, fetching water, and other tasks that provide household needs through environmental resources. In less-developed countries, droughts are the most common cause of severe food shortages, affecting agriculture first. As a result, changes to the environment are likely to compromise women's health in these unique ways.

According to the research, when a crisis hits, women are typically the first to sacrifice their own food to ensure their children and others have enough to eat. Food insecurity directly leads to infection risks through nutrient deficiencies. Additionally, food [insecurity](#) indirectly intensifies gendered inequalities that limit women's access to healthcare, education, and improved autonomy, potentially putting women in a more vulnerable

position of contracting HIV.

"Women in less-developed countries disproportionately bear the burden in terms of ill health when facing [food insecurity](#) or a shock or disaster like drought that impacts the ability to get food or harvest food," said Austin. "This information would be useful for policy makers and people working in international development and disaster response."

**More information:** Kelly F. Austin et al, Drying Climates and Gendered Suffering: Links Between Drought, Food Insecurity, and Women's HIV in Less-Developed Countries, *Social Indicators Research* (2020). [DOI: 10.1007/s11205-020-02562-x](https://doi.org/10.1007/s11205-020-02562-x)

Provided by Lehigh University

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