

# Study shows Black households pay higher heating costs, seek cold-related medical care more often

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Ticking up the thermostat a degree or two is going to cost anyone more money, but a new study from UConn researchers suggests Black

households pay more to keep their homes comfortable, in part due to increased cold sensitivity.

The finding, [published](#) this fall in *Energy Economics*, spans the socioeconomic spectrum and also states Black people who can't afford those couple extra degrees end up seeking medical attention more often than white counterparts.

It's a conclusion that UConn's Jaeung Sim, assistant professor in the operations and information management department in the School of Business, says he didn't expect. He and colleague Sosung Baik simply were researching household energy consumption patterns when they made the discovery.

"We didn't intend to investigate the [racial differences](#)," Sim says. "We were trying to figure out the relationship between smart electric devices and energy consumption, and, at first, we considered racial information only as a control variable. Then we started to notice some unexpected patterns."

They looked at 5,686 American households included in the federal Residential Energy Consumption Survey and determined Black households spend \$120.20 more annually in total than other households on average, with the gap increasing in higher income brackets, even after considering things like insulation, number of windows, and roofing types—all thanks to disproportionate heating demand.

With about 13.6 million Black households in the U.S., their paper says Black households collectively spend \$1.6 billion more annually for energy consumption.

"This racial difference is not attributable to income differences, regional differences, or housing characteristics. We accounted for all of that,"

Sim says.

They noticed the pattern early in their research, Sim says, and agreed to bring in UConn Health's Chief Diversity Officer Dr. Jeffrey F. Hines to provide his expertise in racial demographics and [health outcomes](#).

"He gave us insight on how we should interpret the results, how to describe racial differences, and how to define race," Sim says. "And although this research was about household energy consumption, we found some health variables and had no idea how to interpret the results properly."

Hines says overall cost disparities in the country are thought to be about \$400 billion this year alone and expected to only climb, so noting those disparities and doing something to address them needs to happen now.

"The [average person](#) should care about this because, one, not only is it the right thing to do, but two, it's costing us all money," Hines says.

"There shouldn't be a group of people that suffers a higher incidence of morbidity or mortality because of where they live, what they look like, who they love. All those disparities exist for the LGBTQ population, for our Black and brown communities, for our rural communities, for our migrant communities."

The heating survey asked participants whether someone in the household needed medical attention in the last year because of the cold, and after considering socioeconomic factors, it found Black households are 1.4 percentage points more likely to seek care for cold-related problems.

When asked whether they sought attention for heat-related issues, there was no difference between Black people and those in other groups, the paper says. That mirrors the finding that Black households did not spend more for air conditioning than others.

"People who are unlikely to have heat are in areas that have been chronically disinvested in and under-resourced. As a result, their health outcomes are likely going to be less or they might utilize health resources more because they are the victims of the effects of lack of heat from a health perspective and we see this in other social determinants," Hines says.

Take, for instance, people living in substandard housing that has mold or lead. Children will have higher incidences of asthma, which oftentimes equates to more school absences and a gap in their education, Hines explains. Everything is connected—housing, health, and, in this case, educational outcomes.

And that's why it's important to get studies like this one in the books, Hines adds.

After studying underrepresented populations for much of his career, he says he was surprised the heating study found that even people who may be suffering financially are seeking health services. Because they have less disposable income, one wouldn't expect that.

"That's one of the things we're thinking about doing a deeper dive in," Hines says, asking, "was that an outlier, just the population we looked at, because other data doesn't support that finding."

The trio has agreed to continue their research.

Hines says he's eager to determine whether the care people sought was with a primary provider or an emergency room and to look closer at Connecticut's population to see what other previously unseen disparities may exist.

"I'm thinking of trying to find the connection between climate change

and the racial disparities in health care burden," Sim says. "The findings could influence both climate policy and energy policy."

Hines also says he plans to leverage some of the findings of this paper at the state level as decisions get made about policies to address disparities in Connecticut.

Government programs like the federal Low-Income Home Energy Assistance Program and the Weatherization Assistance Program, which seek to help people with home heating costs, target low-income individuals when even higher socioeconomic Black households have excessive heating costs compared to their peers, the study says.

"We need to be able to deploy interventions that are targeted and truly meet the needs of a particular population," Hines says. "If we can continue to address that with state legislators, we can get people more access to what they need."

**More information:** Sosung Baik et al, Racial disparities in the energy burden beyond socio-economic inequality, *Energy Economics* (2023).  
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