

First look at thermostat wars suggests women may be losing these battles

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Your characterization of the thermostat war going on in your house is

likely to depend at least in part on whether you're a man or a woman, new research suggests.

The study has taken an initial glimpse at these skirmishes in a sample of Ohio homes, offering the first known data on joint consumer decision-making around household temperature settings and potential effects of those actions on energy use.

The study identified three types of interactions around [thermostat](#) settings: agreement, compromise and conflict.

The research also found that men were more likely to report their interactions with other [household members](#) around the thermostat as compromises or agreements, and women were a bit more likely to describe their interactions as conflicts. These differences could relate to individuals' perceptions of the nature of the interactions or imply that in this war story, women don't typically prevail.

"It's possible that women are losing the thermostat battle," said Nicole Sintov, lead author of the study and assistant professor of behavior, decision making and sustainability at The Ohio State University. "The data hint toward that being what's possibly going on here.

"A woman might construe as a conflict what a man might construe as a compromise. That could be an alternate explanation and it's something we want to explore in future work," she said. "The fact that we also found that women in our study were uncomfortable more often suggests that the thermal environment was not catering to their needs."

The study is published today (Nov. 13) in the journal *PLOS ONE*.

Sintov's work focuses on understanding consumer behavior around [energy use](#)—say, installing [solar panels](#) on a house or buying a hybrid

car—by accounting for the fact that in many cases, these decisions follow discussions among two or more adults. And after those discussions, do resulting decisions trend toward energy consumption or conservation? And what role, if any, does gender play in all of this?

"Here, we're using the thermostat as an example. This is an everyday behavior. Most households have one thermostat and multiple occupants, and through some process of negotiation—because we all have differing thermal comfort preferences—a thermostat setting gets chosen," she said.

"That has not been examined before: how people interact around an energy decision in a household. This is a starting point."

Individuals from 112 households in central Ohio completed a survey and provided daily diary entries for at least one week, and ideally two weeks, about thermostat-related decisions and behaviors. One person was selected to represent all occupants in the home, and at least two people lived in each household—which had to have an adjustable thermostat.

The survey measured individuals' preferences for warm or cool environments, attention to monthly energy bills and whether the home had a programmable thermostat—and if so, whether it was programmed.

(In related news, the results revealed that having the thermostat programmed had no bearing on whether a household was making adjustments to the thermostat. "It's counterintuitive," Sintov said. "You'd assume they'd stick to the program and make fewer adjustments.")

Each night, participants were reminded to complete their diaries, answering two questions: "Did you or anyone else in your household adjust the thermostat in your home today? What adjustments were made and by whom?" and "Others in your home may have different thoughts

about how warm or cool it is in the house. Tell us about any related discussions you had."

Three interaction types surfaced in the analysis: agreement, when two or more occupants agreed on their comfort level and any related decision regarding the thermostat; compromise, when the interaction began with disagreement but resulted in agreement; and conflict, when occupants disagreed at the beginning and end of the discussion.

In addition to finding that men tended to report more agreements and compromises while women reported marginally more conflicts, the study revealed that thermostat adjustments tended to be more likely to occur after agreements and compromises, but conflicts were associated with fewer temperature changes.

"It seems like if you disagree with someone on thermal comfort and what you want to do to moderate that, the thermostat is less likely to get changed," Sintov said. "I'm not here to say that's a good or bad thing. It suggests there's a stalemate for some reason that we don't know. It could be that one person puts on a sweater to warm up while another opens a window to cool down.

"Alternatively, one person might exert authority over the thermostat to cater to their needs while other household members' needs are sidelined. There are some negatives for those involved in conflicts—because you have two or more people who are already uncomfortable, and you also now have interpersonal [conflict](#), which is not pleasant."

Sintov noted that in this work, and in most of the limited literature on this topic, only households occupied by men and women are represented. Hence, she said, it is unclear how results may translate to other gender identities, and this is an area future research should examine.

What was not resolved in this study is whether the adjustments made to thermostats were energy consuming or energy saving—the responses were not specific enough to gauge those effects, Sintov said.

Provided by The Ohio State University

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