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Zoom fatigue worse for women, Stanford study finds

In the first large-scale study examining the full extent of Zoom fatigue, Stanford researchers find that women report feeling more exhausted than men following video calls – and the “self-view” display may be to blame.

BY MELISSA DE WITTE

With the pandemic forcing many Americans to retreat into their homes, video calls have taken over people’s work and personal lives. Now, new Stanford research (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3820035) reveals how the shift from in-person meetings to virtual ones has taken its toll, particularly among women.

The feeling of exhaustion that comes from a day of back-to-back online meetings – also known as “Zoom fatigue” – is greater for women, according to the researchers’ data. They found that overall, one in seven women – 13.8 percent – compared with one in 20 men – 5.5 percent – reported feeling “very” to “extremely” fatigued after Zoom calls.

These new findings build on a paper the Stanford researchers recently published in the journal *Technology, Mind and Behavior* (<https://news.stanford.edu/2021/02/23/four-causes-zoom-fatigue-solutions/>) that explored why people might feel exhausted following video conference calls. Now, they have the data to show who is feeling the strain. For their follow-up study, the researchers surveyed 10,322 participants in February and March using their “Zoom Exhaustion and Fatigue Scale (<https://vhil.stanford.edu/zef/>)” to better understand the individual differences of burnout from the extended use of video conferencing technologies during the past year.

These findings add to a growing understanding of how the COVID-19 pandemic is disproportionately affecting certain groups of people, said Jeffrey Hancock (<https://comm.stanford.edu/faculty-hancock/>), professor of communication in the School of Humanities and Sciences and co-author of the new study (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3820035) released April 13 on the Social Science Research Network.

“We’ve all heard stories about Zoom fatigue and anecdotal evidence that women are affected more, but now we have quantitative data that Zoom fatigue is worse for women, and more importantly, we know why,” Hancock said.

The researchers found that what contributed most to the feeling of exhaustion among women was an increase in what social psychologists describe as “self-focused attention (<https://www.liebertpub.com/doi/10.1089/cyber.2009.0411>)” triggered by the self-view in video conferencing.

“Self-focused attention refers to a heightened awareness of how one comes across or how one appears in a conversation,” Hancock said.

To measure this effect, the researchers asked participants questions such as: “During a video conference, how concerned do you feel about seeing yourself?” and “During a video conference, how distracting is it to see yourself?”

The researchers found that women answered these questions at higher rates than men – a finding that is consistent with existing research that shows women have a greater propensity to self-focus than men when they are in the presence of a mirror (<https://psycnet.apa.org/record/1989-15524-001>). That prolonged self-focus can produce negative emotions, or what the researchers call “mirror anxiety,” Hancock explained.

A simple solution is to change the default display settings and turn off “self-view.”

Also contributing to an increase in Zoom fatigue among women were feelings of being physically trapped by the need to stay centered in the camera’s field of view. Unlike face-to-face meetings where people can move around, pace or stretch, video conferencing limits movement. Another way to address this is to move farther away from the screen or to turn off one’s video during parts of calls.

The researchers found that while women have the same number of meetings per day as men, their meetings tend to run longer. Women were also less likely to take breaks between meetings – all factors that contributed to increased weariness.

The pattern of women being more burned out from videoconferencing than men appears to be robust. “We see this gender effect across multiple different studies, and even after taking into account other factors. It’s a really consistent finding,” Hancock said.

Other differences – personality, age and race

Also associated with Zoom fatigue was personality types: Extraverts reported lower levels of exhaustion following video conferencing than introverts. Calm, emotionally stable people also reported less exhaustion than more anxious individuals, who may also have been affected by the self-attention triggered by the digital mirror.

Age mattered as well: Younger individuals reported higher levels of tiredness compared with older survey participants.

Another factor was race: The researchers’ preliminary data shows that people of color reported a slightly higher level of Zoom fatigue compared with white participants. The researchers are exploring what contributed to this finding in a follow-up project with scholars, including their Stanford colleagues, who study race and media.

“We are working to understand what might be causing this race effect and develop solutions to address it,” Hancock said.

Next steps

While individuals can make changes to their own work habits to avoid burnout, the researchers urge organizations to rethink how they manage their remote workforce. For example, companies could organize more meetings that are video-free, offer guidelines on how frequent and long meetings should be and specify more breaks between meetings.

The paper's contributors include joint first authors Geraldine Fauville, who was a postdoctoral scholar in the lab when she conducted the research and is now a researcher at the University of Gothenburg, Sweden (<https://lincs.gu.se/members/geraldine-fauville>), and Mufan Luo (<https://comm.stanford.edu/doctoral-luo-2/>), a doctoral student in the Stanford Social Media Lab (<https://sml.stanford.edu/>). Anna Carolina Muller Queiroz, a visiting research student at the Virtual Human Interaction Lab (<https://vhil.stanford.edu/>), also contributed along with senior authors Jeffrey Hancock (<https://comm.stanford.edu/faculty-hancock/>), the Harry and Norman Chandler Professor of Communication, and Jeremy Bailenson (<https://vhil.stanford.edu/faculty-and-staff/>), the Thomas More Storke Professor of Communication.

Action items organizations can make to reduce Zoom fatigue:

- 1. Implement no-video meeting days.**
Have a day each week that does not require any video meetings.
- 2. If video is not necessary for a meeting, make "video off" mandatory for that meeting.** People should think hard about whether video is necessary for a meeting, and if it is not, make video-off mandatory so that no one feels the pressure to keep it on.
- 3. Find out if your employees or colleagues are fatigued.** Have your employees take the [Stanford ZEF scale](http://comm.stanford.edu/ZEF) (<http://comm.stanford.edu/ZEF>) to measure their fatigue and find solutions to help reduce it.

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