

Technology in Our Pockets: Can You Ever Get Too Much?

Misra, S., and Stokols, D. (2012). Psychological and Health Outcomes of Perceived Information Overload. *Environment and Behavior*, 44(6), 737-759. doi: 10.1177/0013916511404408 With Ashley Simons-Rudolph

“Advanced technologies have imposed certain behavioral and psychological burdens.”

Exhaustion

Have you felt tired at the end of a day and wondered what you actually “did?” Do you find “unplugging” and turning your phone off leaves you feeling

anxious even when you are not expecting important calls or texts? For many of us the answer is yes and this research suggests one possible reason: information overload. Information overload occurs when individuals feel overwhelmed by multiple communication and information



Figure 1. Staying constantly connected can be bad for our health. Used under Creative Commons.

inputs from *cyber-based* and *place-based* sources of stimulation. Internet and wireless communication technologies have reshaped our environmental experience and can overload us psychologically. This mental overload can lead to behavioral, emotional, and health impacts. Electronic and mobile communication can also create a type of noisiness that impacts us regardless of whether we are personally engaging. Place-based stimulants like noisy work and home environments, exposure to loud and/or consistent noise, and environmental contaminants can also stress our mental capacities and lead to health problems. This study explores how electronic and place-based stimulation impact our perceived physical and mental health problems as well as deeper thinking, like contemplation.

Highlights

Electronics can cause overstimulation similar to environmental contaminants such as noise and air pollution.

Stimulation overload can lead to poorer mental and physical health.

Methods

Four hundred eighty-four undergraduate students (84% female and 16% male) from a large public university in the United States participated in an online questionnaire assessing their perceived information overload levels, stress, health status, contemplative activities, and sensation-seeking levels. Six weeks later, the same participants completed a second online survey.

Project Results

Even when controlling for age, gender, ethnicity, and baseline self-reports of stress and health status, participants self-reported:

- Higher levels of cyber-based overload significantly predicted greater stress.
- Higher levels of cyber-based overload are associated with greater frequency and severity of health problems and less positive feelings about overall health.
- Higher levels of cyber-based overload significantly predicted less time devoted to contemplative activities such as concentrated mental effort and self-reflection.



- Higher composite information overload from both cyber-based and place-based sources predicted higher frequency and severity of a number of health problems and injuries.
- Differences in sensation-seeking among individuals moderate the relationships between cyber-based, place-based, and composite perceived information overload and stress. High-sensation seekers were better able to buffer stress associated with place-based and composite information overload compared with low-sensation seekers.

Figure 2. Tactile engagement can provide a much-needed break from electronic stimulation. [Used under Creative Commons.](#)

What Does This Mean For?

You: Cyber-based overload is common. Understanding the impacts of environmental stimuli is an important factor in promoting good health. Technology improves life in moderation, but there is likely a set point to which more interaction with technology is more harmful than good. This work suggests that this set point differs on sensation-seeking.

Your community: Heightened levels of information overload resulting from increased use of digital communication technologies impacts attentional capacities and well-being. This has a direct impact on the health and strength of relationship-building within communities. Face-to-face communities can consider blending in-person and online communications to reap benefits of both and minimize overload of one or the other.

ON HOW A COMMUNITY PSYCHOLOGY PERSPECTIVE INFORMED THE PROJECT

Although online communities provide unique and additional opportunities to redefine communities, the consistency of connectedness can have unintended consequences. Communities should work together to set reasonable boundaries similar to commonly accepted boundaries for face-to-face interactions, such as when and how much communication is appropriate.

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