

Craving a Cigarette? Pitt Study Suggests Craving Hinders Comprehension Without Your Realizing It

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(PhysOrg.com) -- A new University of Pittsburgh study reveals that craving a cigarette while performing a cognitive task not only increases the chances of a person's mind wandering, but also makes that person less likely to notice when his or her mind has wandered.

The paper, titled “Out for a Smoke: The Impact of Cigarette Craving on Zoning Out During Reading,” provides the first evidence that craving disrupts an individual's meta-awareness, the ability to periodically appraise one's own thoughts.

The research is published in the January issue of [Psychological Science](#).

Pitt professor of psychology Michael Sayette and colleagues Erik Reichle, associate professor and chair of Pitt's cognitive program in psychology, and Jonathan Schooler, professor of psychology at the University of California, Santa Barbara, recruited 44 male and female heavy smokers to take part in the study. All smoked nearly a pack a day and refrained from smoking for at least six hours before arriving at the lab.

Participants were assigned at random to either a crave-condition or low-crave group. Those in the latter group were permitted to smoke throughout the study; members of the crave-condition group had to abstain. Participants were asked to read as many as 34 pages of Tolstoy's

“War and Peace” from a computer screen. If they caught themselves zoning out, they pressed a key labeled ZO. Every few minutes, a tone sounded, and they were asked via the computer, “Were you zoning out?” to which they responded by pressing a “Yes” or “No” key. After 30 minutes, a reading [comprehension](#) test was administered.

Although both groups were prompted a similar number of times, the people craving cigarettes acknowledged more mind-wandering episodes—three times as many, in fact— as those in the low-crave group. But as far as independently recognizing (meta-awareness) that they were zoning out, those who were craving were no more likely to do so than the other group. Participants in the craving group had at least three times as many opportunities to catch themselves zoning out—but they did not. They were impaired in their ability to notice their own mind-wandering episodes.

“Researchers have known for a while that cigarette craving can interfere with our powers of concentration,” Sayette said. “But, similar to what we found in a previous study about the impaired concentration of people who drank, this 'double whammy' (i.e., more zoneouts that take longer to recognize) may explain why craving often disrupts efforts to exercise self-control—a process requiring the ability to become aware of your current state in order to regulate it.”

This observation—that craving may impair sustained attention and reduce meta-awareness—could be of interest to those who study workplace accidents, where [smokers](#) must refrain. It also offers a new way to examine factors that interfere with learning among college students who smoke and must abstain for extended periods during classes.

Provided by University of Pittsburgh

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