

# Aggressive behavior observed after alcohol-related priming

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Researchers from California State University, Long Beach, the University of Kent and the University of Missouri collaborated on a study to test whether briefly exposing participants to alcohol-related terms increases aggressive behavior. It has been well documented by previous research that the consumption of alcohol is directly linked to an increase in aggression and other behavioral extremes. But can simply seeing alcohol-related words have a similar effect on aggressive behavior?

## Designing the experiment

The study, published in the journal *Personality and Social Psychology Bulletin*, involves two experiments. The first experiment tested whether priming [participants](#) with alcohol-related terms would enhance their aggressive responding following an ambiguous provocation, but not following obvious provocation or no provocation at all. Participants were instructed to write a brief essay on a controversial topic, which they were told would be evaluated by another (actually non-existent) participant. After completing the essay, one group was primed with alcohol-related terms, such as whiskey, beer, and vodka, for less than one-tenth of a second. Another group of participants were exposed to non-alcohol related terms, such as coffee, milk and water. Following exposure to the sets of words, participants were provided with the evaluation of their essay. Those in the unambiguous provocation group received an evaluation stating, "This is one of the worst essays I have ever read." The

evaluation given to participants in the ambiguous provocation condition said, "I don't even know where to begin." A third, control group of participants did not receive an evaluation.

Participants' aggression was measured by asking them to recommend the length of time the evaluator of their essay should have to submerge his or her hand into a bucket of ice-cold water, something the participants themselves had just experienced. Lead researcher Bill Pedersen explains that the so-called cold pressor task "is often used in research on pain tolerance, which involves people submerging their hand in a bucket of ice-cold water for a number of seconds. If you've ever gone searching in the cooler for a drink once the ice has started to melt you've probably experienced this feeling; it can really hurt if you leave your hand in for more than a few seconds...Because participants know how painful this is, we can say that their recommendation represents their level of aggression toward the other person."

## **Effects of priming**

Results of the study confirmed the researchers' predictions. When the essay feedback was clearly hostile, participants responded with relatively high levels of aggression regardless of the terms they had been primed with. However, when the feedback was ambiguous, alcohol-primed participants were much more aggressive than nonalcohol-primed participants. The result suggests that simply being exposed to alcohol-related words makes aggressive thoughts more accessible, thereby coloring interpretation of an ambiguous event and prompting an aggressive response.

In a follow-up experiment, the researchers found that the effect of alcohol-word priming on aggressive behavior is relatively short-lived—the effect begins to diminish within 7 minutes, and is gone by 15-minutes following alcohol-word exposure—and that alcohol-word

priming changes the perception of another person's actions, making them seem more hostile. Together, the findings of the two experiments indicate that alcohol cue priming affects behavior primarily by increasing the accessibility of alcohol-related thoughts stored in long-term memory.

Alcohol and aggression are often linked, either through personal experiences or simply through cultural beliefs. The current findings indicate that, because of this link, simply being exposed to alcohol-related words is sufficient to bring about a change in aggressive behavior, particularly when another person's intentions are unclear. This finding is important, in part, because such effects typically are attributed only to alcohol's pharmacological effects on brain function. As this work demonstrates, an increased aggressive response can occur without the consumption of alcohol or even the conscious knowledge that an alcohol-related stimulus has been encountered.

Pedersen's lab is currently looking at how priming different aspects of religion may impact [aggressive behavior](#).

**More information:** Pedersen, W. C., Vasquez, E. A., Bartholow, B. D., Grosvenor, M., & Truong, A. (2014). Are You Insulting Me? Exposure to Alcohol Primes Increases Aggression Following Ambiguous Provocation. *Personality and Social Psychology Bulletin*, 40(7).  
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