

# Creating mental space from alcohol triggers could help college students drink less frequently

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Credit: Stanley Morales from Pexels

If you've ever watched a movie set on a college campus, then you know that American college students are expected to drink. A lot and often.



Usually out of plastic red cups.

That expectation can be hard for real life students to ignore, despite its consequences on their health.

New research from the Communication Neuroscience Lab at the Annenberg School for Communication at the University of Pennsylvania—in collaboration with researchers from McGill University, Temple University, Brigham Young University, Columbia University, Dartmouth College, and others within Penn—has found that encouraging college students to create psychological distance between themselves and triggers to drink alcohol can reduce how often they drink.

The research is <u>published</u> in the journal *Scientific Reports*.

## A different perspective

Prior research has found that people with <u>alcohol use disorder</u> can be motivated to make healthier choices regarding drinking by using mindfulness or perspective-taking thinking, also called psychological distancing.

"In psychological distancing, a person is trained to create mental space from their immediate reactions to triggers to engage in unhealthy behavior, like binge eating or drinking," says lead author Mia Jovanova, a recent graduate of the Annenberg School for Communication's doctoral program, "possibly by re-directing attention away from reactive thought patterns, and by de-automatizing responses to triggers."

Since college students are often faced with triggers to drink alcohol, researchers at the lab, directed by Annenberg School Vice Dean Emily Falk, Professor of Communication, Psychology, and Marketing



wondered if psychological distancing techniques could encourage healthy college students to make better choices regarding alcohol before problem drinking starts.

The team tested two strategies for creating psychological distance from reactions to alcohol triggers: mindfulness and perspective-taking.

With mindfulness, when a person is triggered to drink, they observe the situation in an impartial, nonjudgmental, or curious mindset. When using perspective-taking, a person considers how someone else would react to the situation.

In two experiments, conducted in 2019 and 2020, the researchers tested if those two techniques could encourage college students' to change their drinking behavior in real life, by using text message reminders.

In 2019, 108 college students were randomly assigned to three groups—a mindfulness group, a perspective-taking group, and a <u>control group</u>—and taught to use their respective psychological distance techniques.

Members of the perspective-taking group were instructed to react to alcohol cues—seeing or thinking about alcohol—as if they were a friend who drinks less than they do.

Members of the mindfulness group were taught to mentally distance themselves from these cues by "observing the situation, and their response to it, with an impartial, nonjudgmental, or curious mindset."

The control group was told to act naturally when encountering alcohol triggers.

For 28 days, participants reported their alcohol use in the morning and night and received text message reminders related to the study. For



members of the experimental groups, for one week these reminders were neutral control messages, while during the next they were reminded to practice their specific training—mindfulness or perspective-taking—when encountering alcohol:

- Mindfulness text message: If you are around alcohol today,
  REACT MINDFULLY, notice, acknowledge, and accept the thoughts and feelings you have
- Perspective-taking text message: If you are around alcohol today, imagine how [NAME] would react, try to imagine the feelings and thoughts that [NAME] would have
- Control text message: If you are around alcohol today, REACT NATURALLY—have whatever thoughts and feelings you would normally have

"Our main comparison asked whether individuals were less likely to drink on the weeks when they got the psychological distance intervention prompts versus the control prompts," Jovanova says.

The researchers found that both mindfulness or perspective-taking reminders reduced drinking frequency (the number of drinking occasions per week) but did not influence the amount of alcohol consumed during these drinking occasions.

# **Drinking off-campus**

After the COVID-19 virus broke out, the researchers closely replicated the study—making all elements of their psychological distancing training virtual.

The 2020 study included 218 participants, who ended up physically leaving campus because of the pandemic and completed the study fully remotely.



Results from this second, larger study matched the previous study, despite the COVID-related changing context. Participants in the mindfulness and perspective-taking groups drank less frequently on weeks that they received intervention reminders.

These studies show that interventions as simple as text message reminders, that draw on psychological distancing, have potential to make positive changes in alcohol use frequency among college students who are social drinkers, the researchers say.

### **Next steps**

"I like to think of this as a proof of concept," Jovanova says. "One next step would be to test what kind of psychological distancing reminders directly target the specific amount consumed when drinking, and to optimize the right time to send reminders for different individuals."

She also hopes that this sort of intervention, using something so ubiquitous as a smartphone, could also promote other positive behaviors, like exercise and healthier eating.

"These experiments show the potential in combining <u>psychological</u> <u>distance</u> strategies and smartphones from a preventative standpoint," she says. "Maybe to pave the way for more personalized reminders before unhealthy habits develop."

Jovanova expanded on this work in her Ph.D. dissertation by creating individualized models to predict alcohol use and physical activity from smartphones and machine learning techniques.

She is now a postdoctoral researcher at the SaxeLab at MIT, where she studies cognitive mechanisms of health legitimacy. Beginning in fall 2024, Jovanova will lead the CSS Health Lab, a collaboration between



the School of Medicine at the University of St. Gallen (HSG) and ETH Zurich in Switzerland. The lab searches for new ways to improve health and well-being through digital technologies.

This study is part of a larger interdisciplinary project spanning five universities and led by Falk, designed to develop interventions to promote healthy behavior in young adults.

"It takes a lot of work to understand the psychology of behavior change and the real world health consequences for young adults," Falk says. "It is a huge team effort, and Mia has worked closely with experts from multiple disciplines to understand the intersection of brain networks, social networks, and well being in college students."

**More information:** Mia Jovanova et al, Psychological distance intervention reminders reduce alcohol consumption frequency in daily life, *Scientific Reports* (2023). DOI: 10.1038/s41598-023-38478-y

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