

# Alcohol intervention for college drinkers leads to safer drinking behaviors among their close social network

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Following a brief intervention delivered to certain heavy drinkers, alcohol use and risky social ties decreased among those students' close

social connections who were also heavy drinkers, according to a novel study of first-year college students' alcohol consumption and social networks.

The researchers demonstrated a "spillover" effect, in which the behavioral benefits of an intervention diffuse through a social network. Peer [social relationships](#) are known to play an important role in young adult drinking, and the transition to college is a critical period for alcohol risk.

Social influences in the first semester of college may be magnified by the inherent proximity of residential campus housing, and those early peer relationships might help set the stage for ongoing behaviors. Past studies show that substance use behavior, for example, diffuses across relatively close connections among teens and young adults.

For the new [study](#) in *Alcohol: Clinical & Experimental Research*, investigators explored ways that the embeddedness of individuals in social networks may influence [social change](#)—specifically, whether changes in [alcohol use](#) among some [heavy drinkers](#) transmitted to others in the same college class. The initial behavior change was established via brief motivational interview (BMI) interventions.

The researchers included 1,236 first-year college students (56% White, 23% Asian, 15% Latinx)—living in dormitories starting in the fall 2016 semester—and divided them into two groups. The students completed a [baseline survey](#) assessing their demographics and alcohol use and identifying peers important to them in their early college weeks; the researchers noted which [social connections](#) were reciprocated.

Among the heavy drinkers in each group, one in four were considered "strategic players" (SPs), students with relatively high connections to other heavy drinkers in their group and minimal connections to heavy

drinkers in the other group. The SPs in one group received an in-person Brief Motivational Intervention (BMI) involving trained counselors; this included correcting misperceptions of peers' drinking behaviors.

The SPs in the other group received no intervention. The participants filled out additional surveys early in the following two semesters. The researchers used specialized social network statistical analysis to compare groups in alcohol use and friendship ties between participants who were connected to SPs and those who did not report those [social ties](#)

At baseline, just over half of the participants reported heavy drinking in the past month. Participants appeared likely to form new connections with others who drank similarly to them, though alternative factors seemed to determine whether those connections were maintained. In the BMI group, among the 252 heavy-drinking students who had mutual ties to SPs, a spillover effect emerged.

These participants consumed less alcohol per week throughout the next year than their peers who did not have reciprocal connections to the SPs. In addition, weekly alcohol use did not decrease among the 269 heavy drinkers who had reciprocal ties to SPs in the non-intervention group. Reduced drinking did not transmit in the absence of a reciprocated connection to an intervention SP.

Further, participants in the BMI group—not just those with mutual ties to the SPs—were, between the first and second semesters, more likely than those in the other group to shed ties or not form new connections with people who drank similarly to them.

The behavioral spillover among individuals who were reciprocally tied to BMI recipients suggests that mutual connections between heavy drinkers offer promise for alcohol interventions. Among heavy drinkers

connected to SPs, reciprocal ties were relatively common, suggesting a greater potential for spillover. More research is needed on relationship and network characteristics conducive to behavioral diffusion and how these effects are transmitted.

**More information:** Nancy P. Barnett et al, Dynamic social network analysis of a brief alcohol intervention trial in heavy-drinking college students shows spillover effects, *Alcohol: Clinical and Experimental Research* (2024). [DOI: 10.1111/acer.15237](https://doi.org/10.1111/acer.15237)

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