

# The DRAM, Vol. 10(10) - Doubling down: Changing drinking behavior in college students who drink and smoke

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Today we continue our [Special Series on Addiction and College Students](#). Some research suggests that college students who smoke drink more heavily and frequently than nonsmokers (Weitzman & Chen, 2005). This combination presents health problems. Computer-assisted and mobile phone-based interventions hold promise for people in the college population, who increasingly interact with and rely upon mobile electronic devices in their daily lives. This week's DRAM reviews the success of a brief mobile intervention that targets both heavy drinking and smoking in a group of college students (Witkiewitz, Desai, Bowen, Leigh, Kirouac, & Larimer, 2014).

## Methods

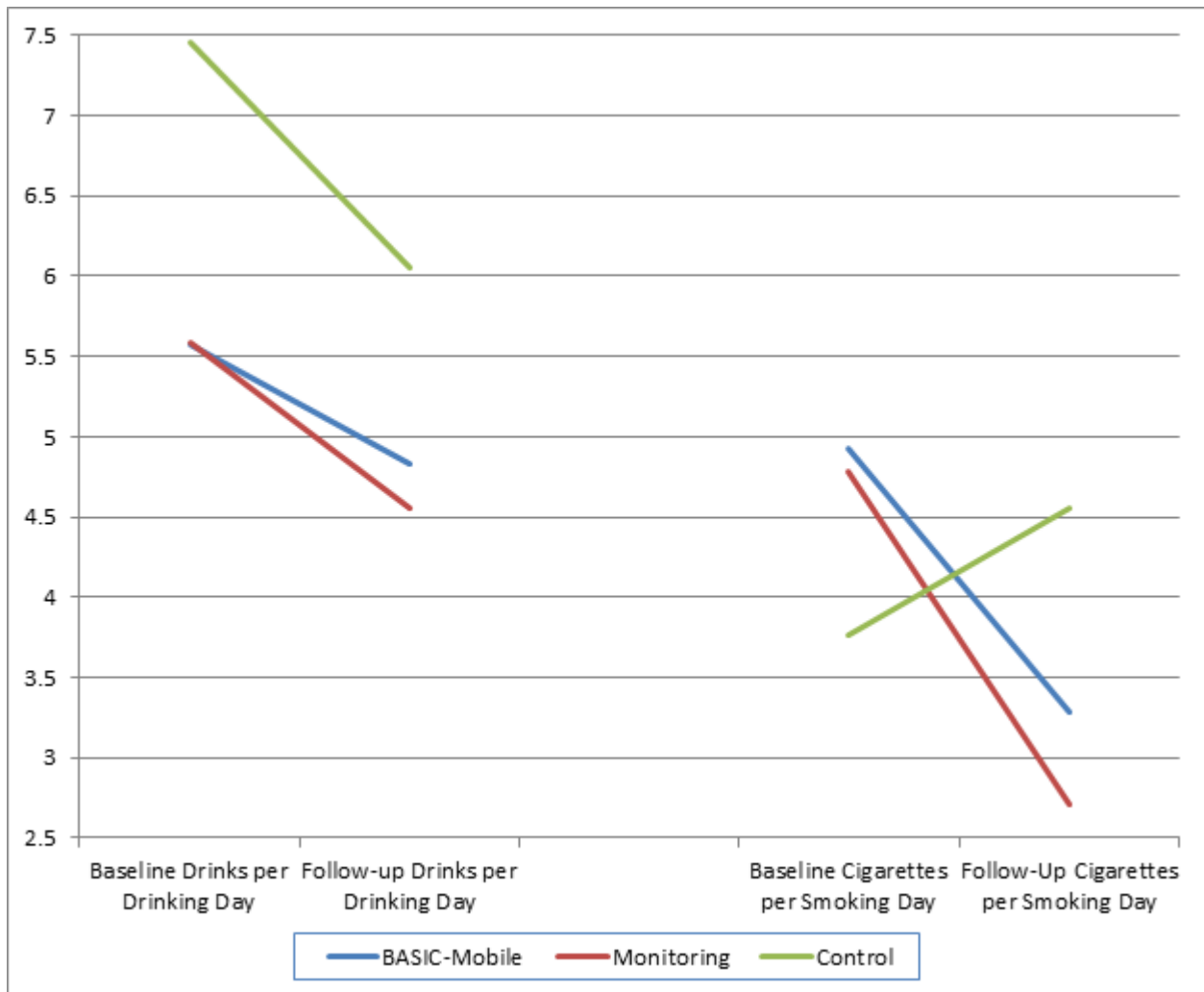
- 94 college students were recruited through print and online advertisements. Participants had to report both binge drinking within the past two weeks and smoking while drinking at least once per week to qualify for the study.
- Participants completed a baseline assessment measuring daily quantity and frequency of alcohol consumption and smoking, as well as alcohol problems.<sup>1</sup>
- Students were then randomized to one of three conditions, which lasted for two weeks:
  - Control (i.e., baseline and 1 month follow-up assessment only);
  - Daily monitoring via mobile assessment;
  - Daily monitoring via mobile assessment combined with personalized feedback about drinking behavior and [cognitive-behavioral therapy](#) (CBT) modules (BASICS-Mobile). They received their CBT intervention modules after they completed each mobile assessment.

- All participants were asked to complete an online 1-month follow-up.
- Researchers used [multi-level models](#) to test whether students receiving BASICS-Mobile reduced their drinking and smoking during the 2-week trial more than students in other conditions. They also tested whether 1-month outcomes varied by condition, controlling for baseline smoking and drinking.

## Results

- Students' drinking and smoking patterns during the two-week trial did not differ by condition.
- As Figure 1 shows, at the 1-month follow-up, all three groups showed similar reductions in drinking behavior (e.g., drinks per drinking day).
- However, participants in the mobile assessment-only and BASICS-Mobile groups significantly reduced the number of cigarettes per day, compared to the control group.
- A small percentage of participants (13.3% of BASICS-Mobile and 6.8% of daily monitoring) reported that participating in the study made them want to smoke or drink more than usual.

Figure 1. Changes in Smoking and Drinking Behaviors from Baseline to Follow-up in Each Condition (adapted from Witkiewitz et al., 2014).



Note. Each line represents the change from baseline to 1-month follow-up.

## Limitations

- The length of the intervention period was very short. Two weeks may not be enough time for the intervention to make much of a change in drinking behavior.
- The 1-month follow-up period might have been too brief to evaluate whether the intervention really had lasting effects on smoking behavior.
- The assessments relied on self-report, which is always susceptible to memory and self-presentation biases.

## Conclusion

Both the BASICS-Mobile group and the group who received daily monitoring reduced their smoking from baseline to follow-up, but the control group did not. These results indicate that some form of mobile assessment and monitoring might help people to control their smoking urges, regardless of whether an intervention

is attached. Surprisingly, the BASICS-Mobile intervention did not reduce drinking quantity more than the control condition. It could be that a two-week intervention period is not enough time to make much of a change in drinking behavior in this population. Drinking is more engrained in the social fabric of college than smoking, which is a solitary behavior. Students who were already drinking when they received the mobile assessment could find it harder to complete than students who had enjoyed a cigarette or two. Future research could compare the lengths of various CBT-based mobile interventions (2 weeks vs 8 weeks, etc.) to find the optimal length of intervention delivery period for drinking behavior.

- Kat Belkin

What do you think? Please use the comment link below to provide feedback on this article.

<sup>1</sup>As measured by the Young Adult Alcohol Problems Screening Test (YAAPST; Hurlbut & Sher, 1992).

## **References**

Hurlbut, S. C., & Sher, K. J. (1992). Assessing alcohol problems in college students. *Journal of American College Health*, 41, 49-58.

Weitzman, E. R., & Chen, Y.Y. (2005). The co-occurrence of smoking and drinking among young adults in college: National survey results from the United States. *Drug and Alcohol Dependence*, 80, 377-386.

Witkiewitz, K., Desai, S. A., Bowen, S., Leigh, B. C., Kirouac, M., & Larimer, M. E. (2014). Development and evaluation of a mobile intervention for heavy drinking and smoking among college students. *Psychology of Addictive Behaviors*. <http://dx.doi.org/10.1037/a0034747>