

ASHES, Vol. 10(9) - College lab rats: Literally

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Many college campuses allow smoking only in specific areas on campus. The intent of such policies is to (1) reduce second-hand smoke exposure among non-smokers and (2) limit smoking opportunities among college students who do smoke. However, these practices might have unintended consequences. Animal model studies suggest that social interaction can reinforce the rewards obtained from nicotine; pairing the two together appears to make both more rewarding (see Thiel, Sanabria, & Neiswander, 2009). Today, as part of our [Special Series on Addiction and College Students](#), the ASHES reviews a study that applies these animal models to college smoking, testing whether campus practices of designating specific on-campus smoking areas actually increase their students' desire to smoke (Lochbihler, Miller, & Etcheverry, 2014).

Methods

- Participants were 94 college students recruited via email at a Midwestern university with designated smoking areas who reported smoking within the past 30 days.
- Participants completed an online survey that measured several aspects of their on-campus smoking habits, including where and how frequently they smoked, how rewarding smoking was for them, and whether they interacted with others while smoking.
- The researchers used [regression analyses](#) to determine whether social interaction predicted frequency and enjoyment of visits to the smoking area, and whether that relationship was [mediated](#) by how rewarding participants found smoking on campus.

Results

- As expected, participants were more likely to report interacting with others while smoking in designated areas compared to other areas.
- Also as expected, students who reported interacting while smoking found smoking on campus to be more rewarding than students who did not interact while smoking, $\beta = .38$, $p < .01$.

- As Table 1 shows, social interaction predicted both frequency and enjoyment of visits to participants' preferred smoking areas. The rewarding nature of smoking on campus also predicted both frequency and enjoyment of visits.
- Feeling of reward partially mediated the relationship between social interaction and frequency of visits to smoking areas (i.e., reducing the β from .48 to .32), and the relationship between social interaction and enjoyment of visits (i.e., reducing the β from .45 to .18).

Predictors	Outcome: Frequency of visits to preferred smoking area (Beta)	Outcome: Enjoyment of visits to preferred smoking area (Beta)
<i>Model 1</i>		
Social Interaction	.48***	.45***
<i>Model 2</i>		
Social Interaction	.32**	.18*
Perceived Reward	.40***	.69***

Figure. Models Predicting Frequency and Enjoyment of Visits to Preferred Smoking Area

Note. Researchers also measured demographics and personality; these models controlled for age, gender, extroversion, openness, and whether parents smoke. *** $p < .001$; ** $p < .01$; * $p < .05$

Limitations

- By only using social interaction in their model, the authors did not test directly whether the designated smoking areas increased perceived reward.
- The study was cross-sectional, so it could not measure whether the designated smoking areas actually increased students' smoking across time.

Conclusion

The current study suggests that designated smoking areas might facilitate social interaction while smoking and thus make smoking more rewarding than it would be otherwise. The findings confirmed that, similar to animal models, students who

interact while smoking find smoking more rewarding than those who do not. Future work ought to compare different types of designated smoking areas (e.g., a small confined smoking area vs. parking lots) and their effects across time.

— Sarah Nelson

References

Lochbihler, B. A., Miller, D. A., Etcheverry, P. E. (2014). Extending animal models to explore social rewards associated with designated smoking areas on college campuses, *Journal of American College Health*, 62(3), 145-152.

Thiel, K. J., Sanabria, F., Neiswander, J. L. (2009). Synergistic interaction between nicotine and social rewards in adolescent male rats. *Psychopharmacology*, 204, 391-402.

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