Muench, C., Malloy, E. J., & Juliano, L. M. (2020). Lower self-efficacy and greater depressive symptoms predict greater failure to recover from a single lapse cigarette. *Journal of Consulting and Clinical Psychology, 88*(10), 965–970. [https://doi.org/10.1037/ccp0000605](https://psycnet.apa.org/doi/10.1037/ccp0000605)

*Takeaway: Source for lapses leading to more lapses/relapse.*

* A single lapse after quitting smoking put participants at 2.5 times more likely chances of subsequent smoking.
* Provides evidence that a single lapse cigarette after quitting plays a causal role in subsequent smoking and suggests that individuals with lower post-quit abstinence self-efficacy and greater depressive symptoms are less likely to recover from a lapse.

Kuerbis, A. N., Shao, S., Treloar Padovano, H., Jadanova, A., Selva Kumar, D., Vitale, R., Nitzburg, G., Vadhan, N. P., & Morgenstern, J. (2020). Context and craving among individuals with alcohol use disorder attempting to moderate their drinking. *Experimental and Clinical Psychopharmacology, 28*(6), 677–687. [https://doi.org/10.1037/pha0000349](https://psycnet.apa.org/doi/10.1037/pha0000349)

*Takeaway: Source of context as factor for lapse.*

* Researchers found that while certain cues were more common, the strongest predictors of craving and subsequent drinking were the cues: time of day or week (e.g., weekend), “people drinking around me,” and being around alcohol (Dulin & Gonzalez, 2017; Trela et al., 2018).
* Valuation is defined here as the personal importance, weight, or emotional tone a person places on a particular drinking context in which they perceive it to be particularly difficult to resist drinking.
* Results demonstrated that being in a highly valued drinking context corresponded to greater reports of any craving and intensity of craving, over and above the influences of several other contextual factors (e.g., negative affect and already drinking).
* Severity of AUD was a moderator of this effect on craving.

Scott T. Walters, Michael S. Businelle, Robert Suchting, Xiaoyin Li, Emily T. Hébert, Eun-Young Mun. (2021). Using machine learning to identify predictors of imminent drinking and create tailored messages for at-risk drinkers experiencing homelessness, *Journal of Substance Abuse Treatment*, 127. <https://doi.org/10.1016/j.jsat.2021.108417>

* The study used machine learning techniques to create a drinking risk algorithm (from EMA data) that predicted 82% of imminent drinking episodes within 4 h of the first drink of the day, and correctly identified 76% of nondrinking episodes.
* Component-wise gradient boosting (CGB) is a machine learning algorithm that builds a penalized generalized linear model from zero predictors upward by iteratively fitting an outcome to a set of variables. The algorithm repeats until it reaches a stopping criterion, chosen via k-fold cross-validation (i.e., averaging across ten training/test splits of the data), which indicates that the outcome prediction no longer improves. Notably, CGB allows for the inclusion of random effects to account for multilevel data (here, a random intercept for repeated observations). This feature is relatively unique among machine learning algorithms, and allows cross-validation to occur across individuals, rather than training and testing the algorithm for each individual separately.

Fisher AJ, Medaglia JD, Jeronimus BF. Lack of group-to-individual generalizability is a threat to human subjects research. Proc Natl Acad Sci U S A. 2018 Jul 3;115(27):E6106-E6115. doi: 10.1073/pnas.1711978115.

*Takeaway: Group-level data are not generalizable to an individual*