

# New tool shows promise for screening and early intervention of substance use disorder among college students

## MAJOR FINDINGS:

This study evaluated whether the Transmissible Liability Index (TLI) would be a useful screening tool for identifying college students who are at especially high risk for developing substance use disorders (SUD). While many existing screening instruments such as CAGE or DAST capture SUD risk by asking about current drinking habits and behaviors, the TLI measures an individual's liability for developing SUD by accounting for a more comprehensive set of known risk factors including temperament, environmental circumstances, and personal experiences. Originally developed as a correlate of paternal illicit drug problems in a sample of boys, the TLI was adapted in this study for a college population. The resulting TLI-College Version (TLI-CV) includes variables such as history of high school probation, childhood conduct problems, personality, depressive symptoms, and others, which were collected during the College Life Study, an ongoing longitudinal study of 1,253 college students.

Researchers found that TLI-CV scores were significantly associated with dependence on alcohol and marijuana at both the first year of college and three years later. More specifically, TLI-CV scores were significantly higher for individuals who were classified at the first year as marijuana-dependent or alcohol-dependent, as compared to individuals who were dependent on neither alcohol nor marijuana at the first year. These differences held true for both White males and White females, as well as the overall sample. The same was true in the comparison of individuals who did and did not become incident alcohol or marijuana dependence cases within three years. Unfortunately, sample sizes within racial minority groups were not always sufficient to allow the researchers to detect significant differences. However, they did find evidence that TLI-CV scores were related to marijuana dependence in Black/African-American, Asian, and other racial minority groups, similar to Whites.

Although the specificity and sensitivity for the TLI-CV were sub-optimal, its utility as a screening tool might be improved by incorporating measures of environmental contexts and/or using it in conjunction with a tool like CAGE or DAST.

While further research is needed before the TLI-CV can be implemented as a screening tool on college campuses, the findings of this study show promise for use across a diverse population. Because the associations between TLI-CV scores and risk of SUD were significant in both genders and across racial minorities, including Blacks and Asians, the TLI-CV has demonstrated utility beyond the White male demographic.

### ***Of major interest to:***

- College Administrators
- Parents
- Educators
- Health Professionals
- Students
- Law and Policy Makers



**Practice and Policy Suggestions:** While most current screening approaches merely assess drinking and drug use behavior, this study highlights the possibility of using a more comprehensive tool such as the TLI-CV. To be more effective, screening strategies should take into account the complex etiology of SUD and the developmental changes that take place during the college years. The TLI-CV might become a useful part of such a strategy. College represents a unique and valuable opportunity for early screening and intervention for SUD. Rather than waiting to intervene at the point of a crisis, such as when a student is arrested or fails a class, colleges should adopt policies that identify at-risk students early.

The complete publication referenced in this research brief can be found here: Arria, A.M., Vincent, K.B., Caldeira, K.M. (2009). Measuring liability for substance use disorder among college students: Implications for screening and early intervention. *American Journal of Drug and Alcohol Abuse*. 35(4), 233-241. doi:10.1080/00952990903005957



## About the College Life Study (CLS)

The CLS is a longitudinal study of 1,253 college students at a large, public, mid-Atlantic university. This study is one of the first large-scale scientific investigations that aims to discover the impact of health-related behaviors during the college experience. Any first time, first-year student between 17 and 19 years old at the university in the fall of 2004 was eligible to participate in a screening survey. The researchers then selected students to participate in the longitudinal study, which consisted of two-hour personal interviews administered annually, beginning with their first year of college. A full description of the methods used is available.<sup>1,2</sup> Inherent to all self-reporting research methods is the possibility for response bias. Because the sample is from one large university, the ability to generalize the findings elsewhere is uncertain. However, response rates have been excellent and attrition bias has been minimal.

For more information about the study, please visit [www.cls.umd.edu](http://www.cls.umd.edu) or contact Amelia M. Arria at the University of Maryland School of Public Health at [aarria@umd.edu](mailto:aarria@umd.edu).

<sup>1</sup> Arria, A.M., Caldeira, K.M., O'Grady, K.E., Vincent, K.B., Fitzelle, D.B., Johnson, E.P., Wish, E.D. (2008). Drug exposure opportunities and use patterns among college students: Results of a longitudinal prospective cohort study. *Substance Abuse*. 29(4), 19-38.

<sup>2</sup> Vincent, K.B., Kasperski, S.J., Caldeira, K.M., Garnier-Dykstra, L.M., Pinchevsky, G.M., O'Grady, K.E., Arria, A.M. (2012). Maintaining superior follow-up rates in a longitudinal study: Experiences from the College Life Study. *International Journal of Multiple Research Approaches*. 6(1), 56-72.

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