

University of Missouri, St. Louis

IRL @ UMSL

---

Undergraduate Research Symposium

UMSL Undergraduate Works

---

June 2022

## Externalizing Behavior Predicts Differential Patterns of Substance Use among Adolescents by Race

Andrea Palacios  
aapngk@umsystem.edu

Follow this and additional works at: <https://irl.umsl.edu/urs>



Part of the [Other Psychology Commons](#)

---

### Recommended Citation

Palacios, Andrea, "Externalizing Behavior Predicts Differential Patterns of Substance Use among Adolescents by Race" (2022). *Undergraduate Research Symposium*. 128.  
Available at: <https://irl.umsl.edu/urs/128>

This Article is brought to you for free and open access by the UMSL Undergraduate Works at IRL @ UMSL. It has been accepted for inclusion in Undergraduate Research Symposium by an authorized administrator of IRL @ UMSL. For more information, please contact [marvinh@umsl.edu](mailto:marvinh@umsl.edu).

# Externalizing Behavior Predicts Differential Patterns of Substance Use among Adolescents by Race

Andrea Palacios Calderon

Mentor: Devin E Banks, PhD

Department of Psychological Sciences

## INTRODUCTION

Early substance use has been linked to negative developmental outcomes on the brain and chronic diseases.<sup>1</sup> Cannabis, alcohol, & nicotine are the substances most frequently used by adolescents.<sup>1</sup>

Externalizing behavior is a strong predictor of substance use among adolescents.<sup>2</sup> It refers to an aversive and disruptive behavior towards other people or things (e.g., breaking the rules, lying, or becoming aggressive). According to *deviance proneness models*, externalizing behavior leads to substance use via impulsive traits, low cognitive inhibition, association with deviant peers or parenting problems.<sup>2</sup>

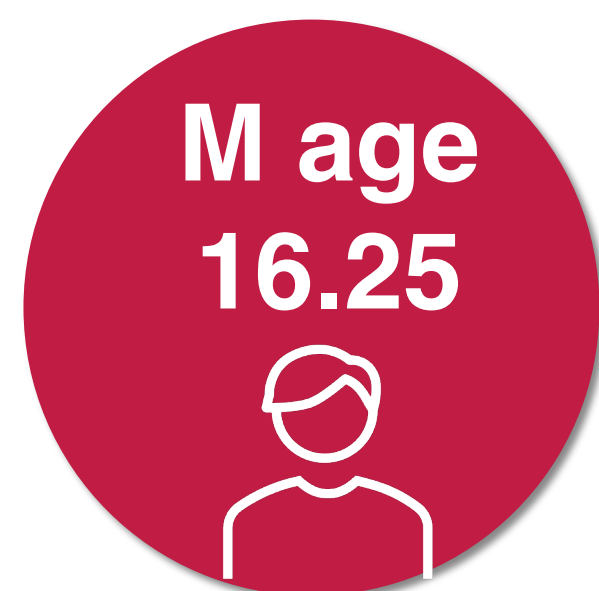
Previous research suggests that risk factors for adolescent substance use, including externalizing behavior, differ for Black and White youth. For example, in treatment and juvenile-justice settings, externalizing behavior was related to substance use among White youth but not Black youth.<sup>3,4</sup>

It is unknown if these racial differences apply in broader adolescent groups. It is also unknown if externalizing behavior is differentially related to cannabis, alcohol, and nicotine use. Identifying the relationship between externalizing behavior and substance use by race and substance type will inform prevention programs that better prevent racial disparities in substance use among adolescents.

## METHOD

We recruited non-Hispanic Black (n = 16) and white (n = 20) adolescents ages 14-18 who owned a cellphone and reported past 30-day use of at least one of: alcohol, cannabis, or nicotine.

Participants completed a baseline survey measuring externalizing behavior via the Youth Self Report<sup>5</sup> followed by daily surveys delivered to their phones for 14 consecutive days that measured daily use of alcohol, cannabis, and nicotine use.



Externalizing behaviors predicted cannabis and nicotine smoking among White adolescents but not among Black adolescents.



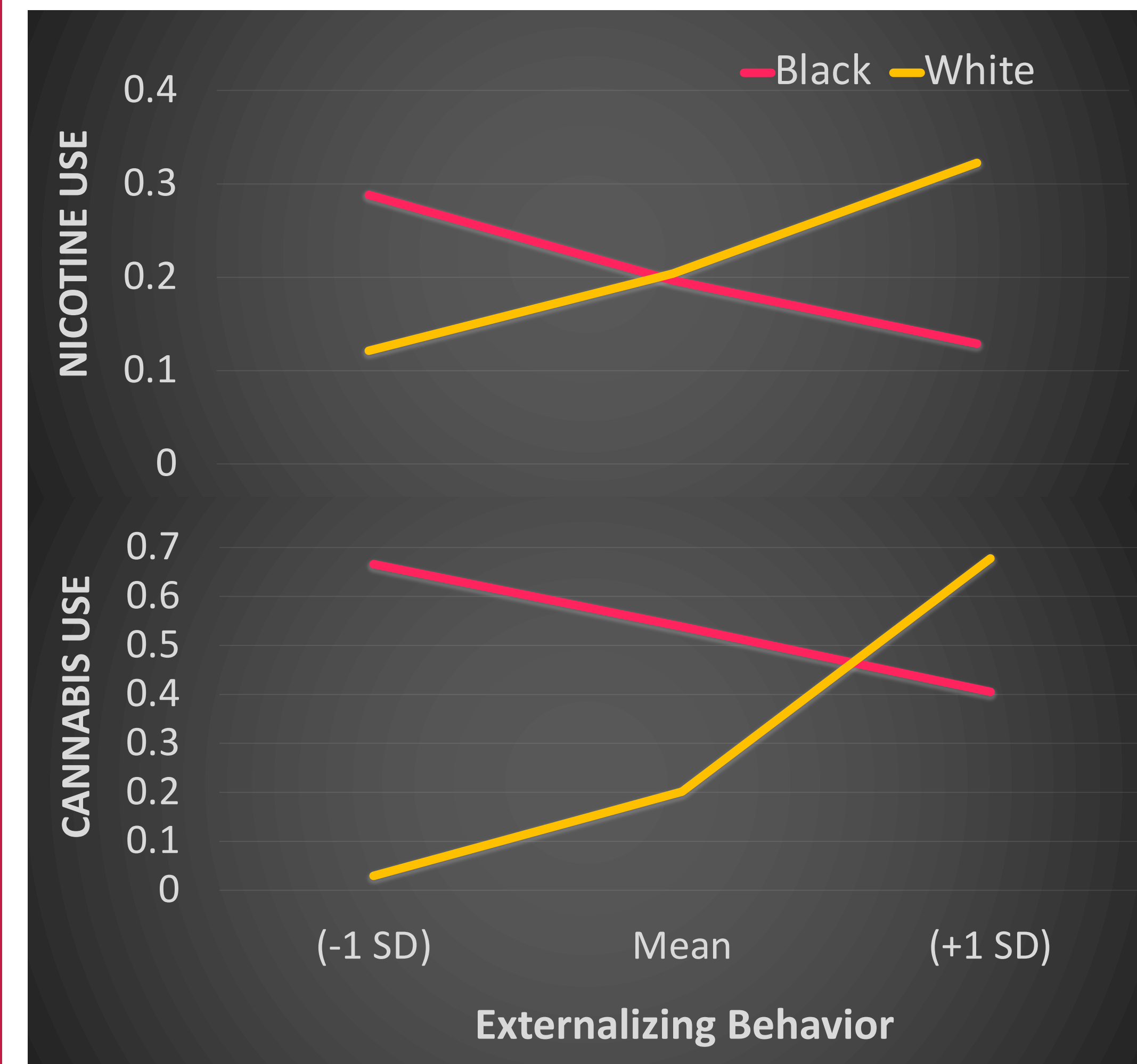
Substance use among Black adolescents may be more related to social and structural factors rather than behavioral factors.

## References

- Centers for Disease Control and Prevention. (2020, February 10). Teen Substance Use & Risks. Centers for Disease Control and Prevention. Retrieved from <https://www.cdc.gov/ncbddd/fasd/features/teen-substance-use.html>
- Chassin, L., Hussong, A., & Beltran, I. (2009). Adolescent substance use. In *Handbook of adolescent psychology: Individual bases of adolescent development, Vol. 1, 3rd ed.* (pp. 723-763). John Wiley & Sons Inc. .
- Feaster, D. J., Robbins, M. S., Henderson, C., Horigian, V., Puccinelli, M. J., Burlew, A. K., & Szapocznik, J. (2010). Equivalence of family functioning and externalizing behaviors in adolescent substance users of different race/ethnicity. *Journal of Substance Abuse Treatment, 38*, S113-S124.
- Feldstein Ewing, S. W., Venner, K. L., Mead, H. K., & Bryan, A. D. (2011). Exploring racial/ethnic differences in substance use: A preliminary theory-based investigation with juvenile justice-involved youth. *BMC Pediatrics, 11*(1), 1-10.
- Achenbach, T., & Rescorla, L. (2001). Manual for the ASEBA school-age forms & profiles: an integrated system of multi-informant assessment Burlington, VT: University of Vermont. *Research Center for Children, Youth, & Families.*
- Lambert, S. F., Brown, T. L., Phillips, C. M., & Jalongo, N. S. (2004). The relationship between perceptions of neighborhood characteristics and substance use among urban African American adolescents. *American Journal of Community Psychology, 34*(3), 205-218.
- Stock, M. L., Gibbons, F. X., Walsh, L. A., & Gerrard, M. (2011). Racial identification, racial discrimination, and substance use vulnerability among African American young adults. *Personality and Social Psychology Bulletin, 37*(10), 1349-1361.

## RESULTS

### Racial Differences in the Association of Externalizing Behavior and Substance Use



In the full sample, externalizing behavior was negatively associated with alcohol use (OR = .84,  $p = .038$ ), but did not predict cannabis or nicotine use. However, there was a significant interaction between race and externalizing behavior for **cannabis** (OR = 1.90,  $p < .001$ ) and **nicotine** (OR = 1.32,  $p = .048$ )—externalizing behavior predicted use of both among White, but not Black adolescents (see figure).

## DISCUSSION

Despite Black adolescents reporting similar rates of substance use as White youth, their use was not predicted by externalizing behavior. Substance use among Black adolescents could be more closely linked to social and structural factors. For instance, neighborhood disorganization (e.g., high violence, drug activity) can influence substance use among Black adolescents.<sup>5</sup> Further, as Black youth experience racial discrimination, these stressful experiences can lead to substance use.<sup>6</sup> Overall, results support previous evidence that risk factors for adolescent substance use differ for Black youth. More research is needed to improve culturally-relevant prevention among this group.