

PROFILES OF CO-OCCURRING INTERNALIZING AND EXTERNALIZING PROBLEMS AND ADOLESCENT SUBSTANCE USE

Miglana Y. Ivanova (a, b), Samuel W. Stull (a), Rina D. Eiden (a, b, c), Amanda B. Nickerson (d), Jamie M. Ostrov (e), Stephanie A. Godleski (f), Pamela Schuetze (g), Ashley N. Linden-Carmichael (a, b)

a. The Pennsylvania State University, University Park, PA
 b. Edna Bennett Pierce Prevention Research Center, University Park, PA
 c. The Social Science Research Institute, University Park, PA
 d. Albert Center for Bullying Abuse Prevention, Buffalo, NY
 e. University at Buffalo, The State University of New York, Buffalo, NY
 f. Rochester Institute of Technology, Rochester, NY
 g. The State University of New York Buffalo State, Buffalo, NY



BACKGROUND

- Elevated levels of behavior problems, broadly divided into **internalizing (IP)** and **externalizing problems (EP)**, at the transition to formal schooling (early school age) are a marker of continued risk for behavior problems and earlier onset of **substance use (SU)**.
- Early SU initiation is linked to long-term negative physical and mental health outcomes.
- IP and EP interplay via complex mechanisms, developing into distinct co-occurring (e.g., high IP-EP) and pure (e.g., low IP/high EP) profiles. While evidence on the composition of heterogeneous IP-EP profiles is mixed, high co-occurring levels at early school age are associated with adolescent SU.

OBJECTIVE

- To examine the number of **latent IP-EP profiles** at early school age and 2) investigate **whether profile membership is differentially associated with distal SU patterns in early and late adolescence.**

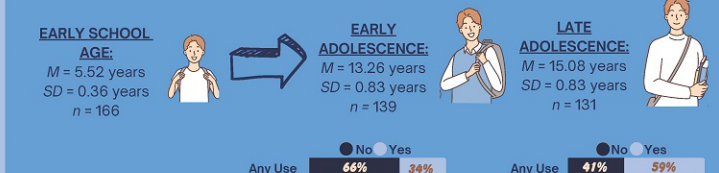
METHODOLOGY

166 mother-child dyads, recruited at birth based on **prenatal cocaine exposure** (demographically matched case-control design).

From those who participated in adolescence:

- 54% female
- 73% Black
- 75% receiving federal assistance

- Caregivers reported child IP-EP at early school age using the **Child Behavior Checklist**.
- SU was assessed in **early and late adolescence** via **self-report and biological samples** (tobacco, cannabis, alcohol, illicit substances, or misused prescriptions) and coded in two ways:
 - any substance use** (ever used [0, 1], early and late adolescence assessment)
 - polysubstance use** (categorical based on count of ever-used substances [0, 1, 1+]; late adolescence only)



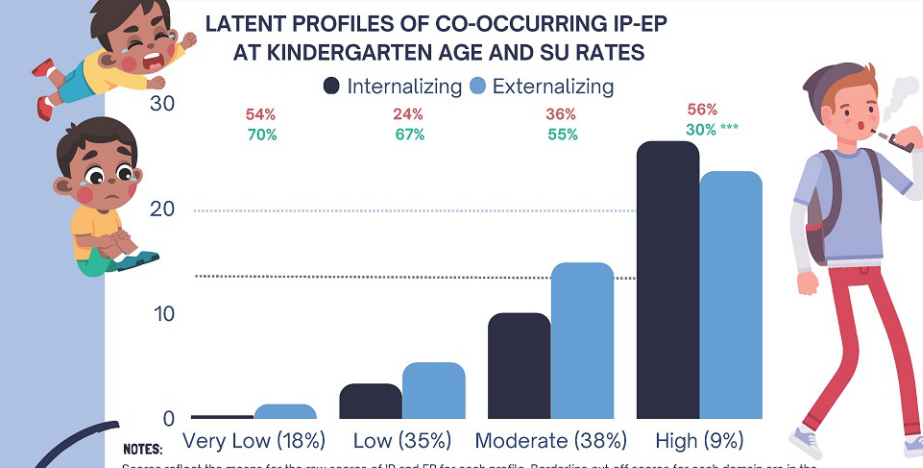
Distinct IP-EP profiles were estimated using **latent profile analysis in MPlus**. Associated distal outcomes were tested with **DCAT** techniques.

ANALYSIS

EARLY ADOLESCENCE: LIKELIHOOD FOR ANY SUBSTANCE USE by profile membership:

- very low** IP-EP > **low** IP-EP ($p = .01$)
- high** IP-EP > **low** IP-EP ($p = .08$)

LATE ADOLESCENCE: No significant differences in LIKELIHOOD FOR SUBSTANCE USE by profile membership for any substance use ($p = .38$) or polysubstance use ($p = .80$).



NOTES: Scores reflect the means for the raw scores of IP and EP for each profile. Borderline cut-off scores for each domain are in the respective color dashed lines for reference. % of profile reporting any SU are displayed in red (early adolescence) and green (late adolescence). *** 1 child had late adolescence missing data and 3 children from the high risk class (n = 13) had positive SU in early adolescence, but not in late adolescence which may have contributed to the smaller percentage of use.

FINDINGS

- Results indicated **distinct co-occurring IP-EP profiles**, in line with evidence of simultaneous IP-EP development.
- Despite small class prevalence, children at clinical IP-EP levels were marginally trending to use substances in **early adolescence**.
- Our unexpected results of higher likelihood of early adolescent SU for children in the very low profile may indicate **adolescent-onset IP-EP trajectories**.

NOTE!

The lack of differences in late adolescence may reflect **higher SU experimentation rates**, other **contextual changes**, but also highlights the importance of capturing **self-report AND biological samples**.

CONCLUSION

Our findings highlight the need to next examine IP-EP profiles **longitudinally** and to consider any contextual changes to better understand the etiology of adolescent SU initiation patterns and **target individualized prevention efforts**.

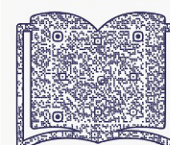


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