

Interactive Effect of Adverse Child Experiences (ACEs) and Suicidality on Adolescent Alcohol and Marijuana Use Frequency

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ACEs + Suicidality = More Drinking, but Not More Marijuana Use among Adolescents with Lifetime Use

ALCOHOL

ACEs + Suicidality = More Drinking (Moderate Sizes)

- ACEs ↑ drinking frequency
- Suicidal Ideation: ACEs ↑ drinking ($\beta = .32$)
- Suicide Plan: ACEs ↑ drinking ($\beta = .35$)
- Suicide Attempt: ACEs ↑ drinking ($\beta = .47$)

ACEs ∅ Suicidality = More Drinking (Small Sized or NS)

- ACEs ↑ alcohol frequency
- Less strong for adolescents without ideation or plan
- Not significant for adolescents without attempts

MARIJUANA

- No significant main effects of ACEs or suicidality
- No significant interactions

Exploratory analyses, only adolescents with *past month* use:

- ACEs ↑ marijuana frequency
- Suicide attempt ↑ marijuana frequency

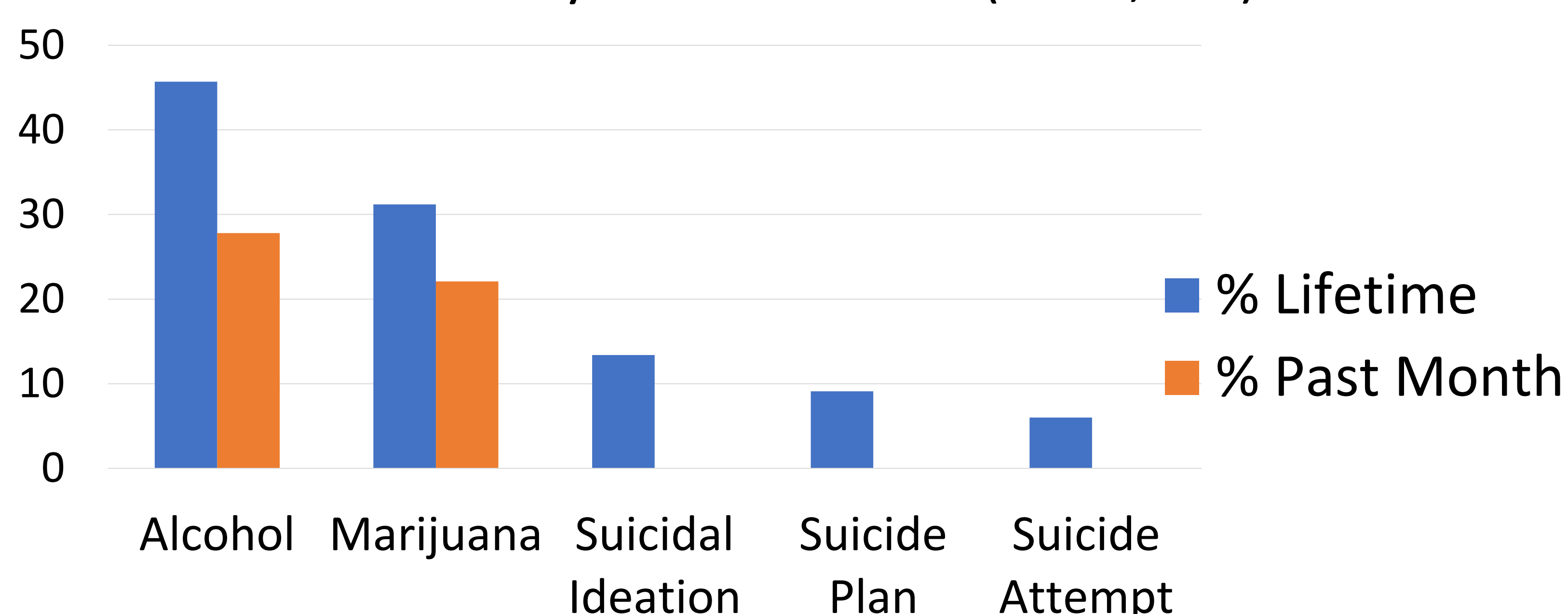
INTRODUCTION

- Alcohol and marijuana are the most common substances used by adolescents (SAMHSA, 2019).
- Identifying adolescents with the highest substance use is imperative for intervention and treatment.
- In adults, trauma + suicidality = substance use (Marshall et al., 2013; Mills et al., 2006; Nejad et al., 2011)
- In adolescents:
 - Trauma → suicidality (Miller et al., 2013; Zatti, 2017)
 - Trauma → substance use (Carliner et al., 2016)
 - Suicidality → substance use (Dawes et al., 2008; Galaif et al., 2007)
- *Does ACEs + suicidality = highest alcohol and marijuana use in adolescents?*

METHOD

- Youth Risk Behavior Surveillance System
- Age 14 – 18 in grades 9 – 12
- 51.4% ($n = 846$) female
- Oversampling for suburban districts
- **Representative sample of upstate NY county**

Figure 1. Rates of Alcohol, Marijuana, and Suicidality in Adolescents ($N = 1,646$)



RESULTS

Table 1. Combined Effect of ACEs and Suicide Attempt on Past Month Alcohol Frequency among those with Lifetime Use

Variable	B	SE(B)	β	R ²	R ² Δ
Step 1: Control Variables					
Biological sex	.19	.09	.08*	.08	.08***
Current Age	.18	.04	.18***		
Age of First Alcohol Use	-.17	.03	-.21***		
Suicide Ideation	.52	.11	.17***		
Step 2: Main Effect & Interaction Terms					
Number of ACEs	-.28	.07	-.48***	.18	.09***
Suicide Attempt	.21	.20	.05		
ACEs X Suicide Attempt	.30	.05	.72***		

ACEs X suicidal ideation, plans, and attempts interactions were similar

Exploratory Analyses

Table 2. Combined Effect of ACEs and Suicide Attempt on Marijuana Frequency among those with Past Month Use

Variable	B	SE(B)	β	R ²	R ² Δ
Step 1: Control Variables					
Biological Sex	.45	.15	.15**	.20	.20**
Current Age	.26	.06	.20**		
Age of First Marijuana Use	-.47	.06	-.40**		
Suicidal Plan	.13	.18	.04		
Step 2: Main Effect & Interaction Terms					
Number of ACEs	.28	.10	.45**	.24	.04**
Suicide Attempt	.62	.31	.15*		
ACEs X Suicide Attempt	-.13	.08	-.31†		

DISCUSSION

- Clinical implications: integrate traumatic stress treatment and safety planning into adolescent alcohol interventions
- Future research: resilience factors that mitigate impact of ACEs and suicidality on alcohol use and chronic marijuana use