



Adolescent Brain Cognitive Development[®]

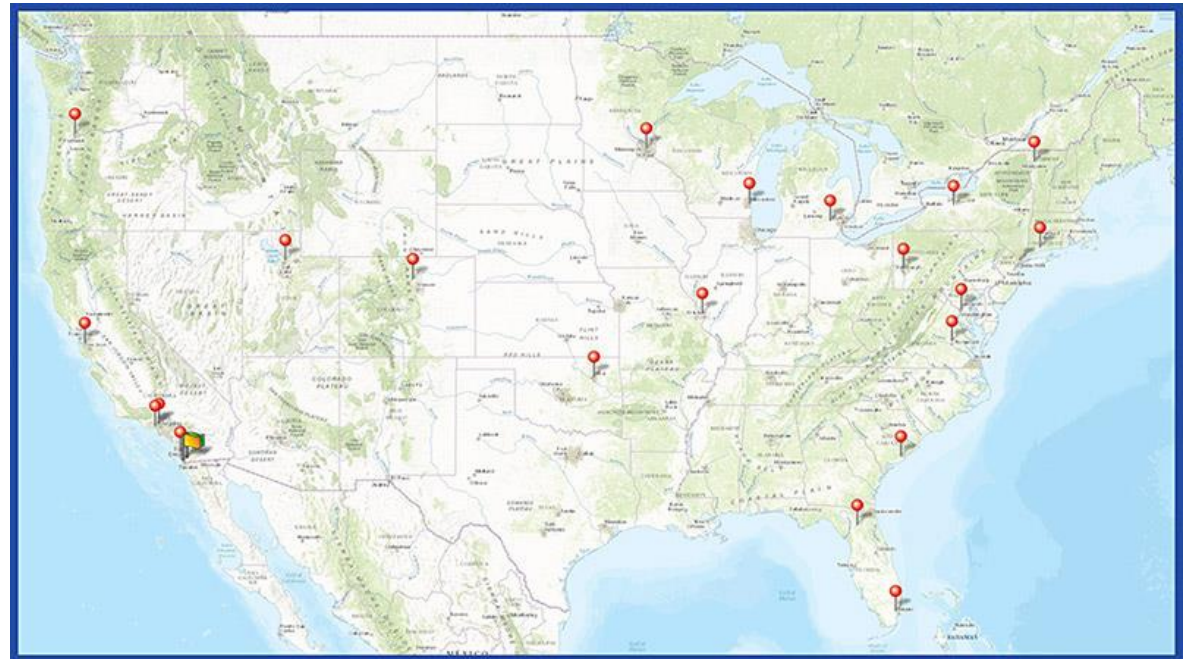
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Adolescent Substance Use: Patterns and Predictors

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PhD

ABCD Overview

- **11,878 children (including 2,100 twins and 30 triplets) aged 9-10.**
- **Annual assessments (biennial MRI) for ten years.**
 - Semi-Structured Interview
 - Collect Biospecimens
- **Mid-Year Phone Interviews**
 - Brief Questionnaire



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Substance Use Assessment

Sep 22	Oct 22	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Jul 23	Aug 23	Aug 23	Sep 23	Oct 23	Nov 23	Dec 23
Jan 24	Feb 24	Mar 24	Apr 24	May 24	Jun 24	Jul 24	Aug 24	Sep 24	Oct 24	Nov 24	Dec 24	Jan 25	Feb 25	Mar 25	Apr 25	May 25
Jun 25	Jul 25															

Sun	Mon	Tue	Wed	Thu	Fri	Sat
28	29	30	31	1	2	3
4	5 Alcohol • 4 standard drinks	6	7	8	9	10
11 First Session	12	13 Alcohol • 4 standard drinks Tisha B'Av	14	15	16	17
18	19	20 Alcohol • 4 standard drinks	21	22 Alcohol • 4 standard drinks	23	24
25	26	27	28	29	30	31
1	2 Labor Day	3	4	5	6 Ganesh Chaturthi	7 Native American Day

EVENT

✓ SUBSTANCE

✓ One/Multiple Days

Date Range

< August, 2024 >

SU	MO	TU	WE	TH	FR	SA
28	29	30	31	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Clear

Substance:

Smoking Marijuana Flower

☐ Show All Substances

3

unit = grams

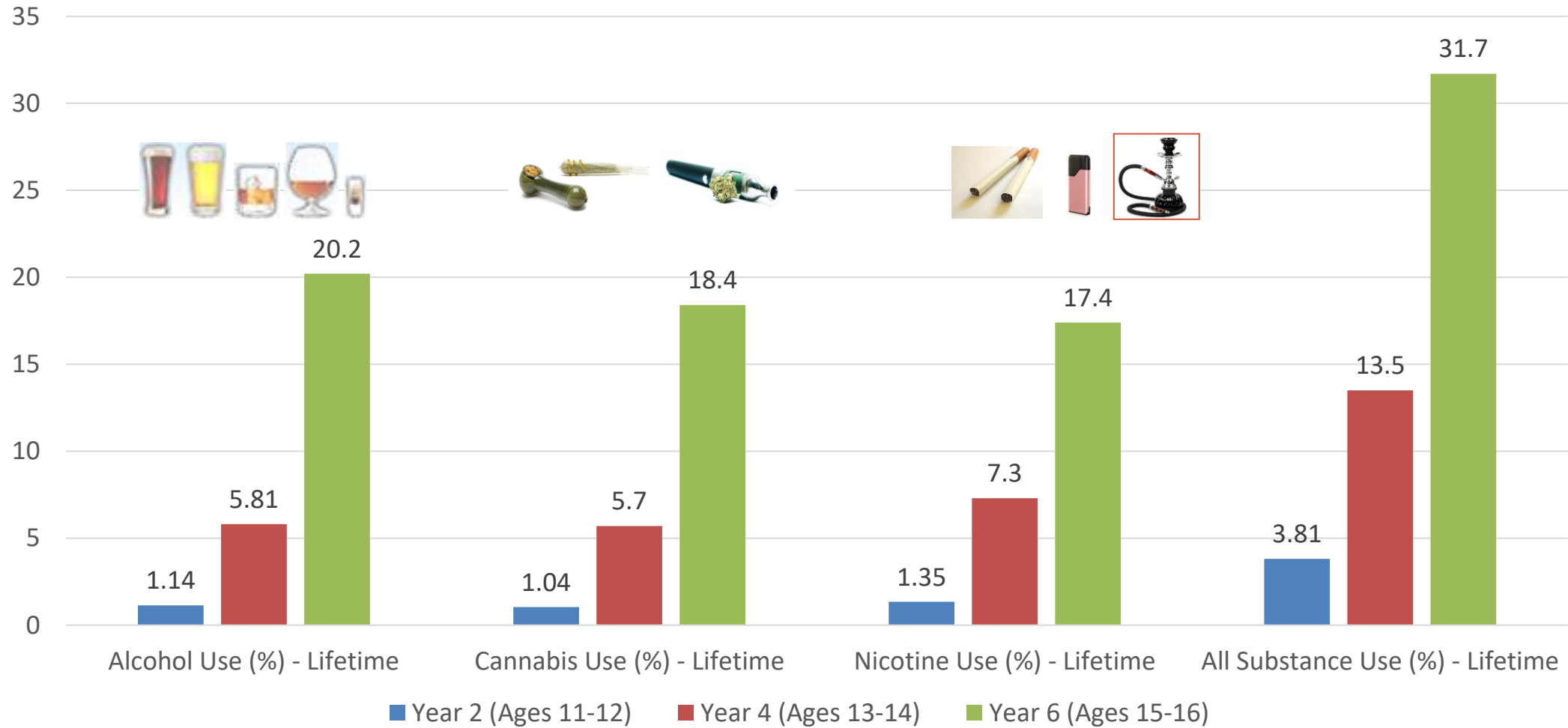
+ ADD SUBSTANCE



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Patterns of Substance Use

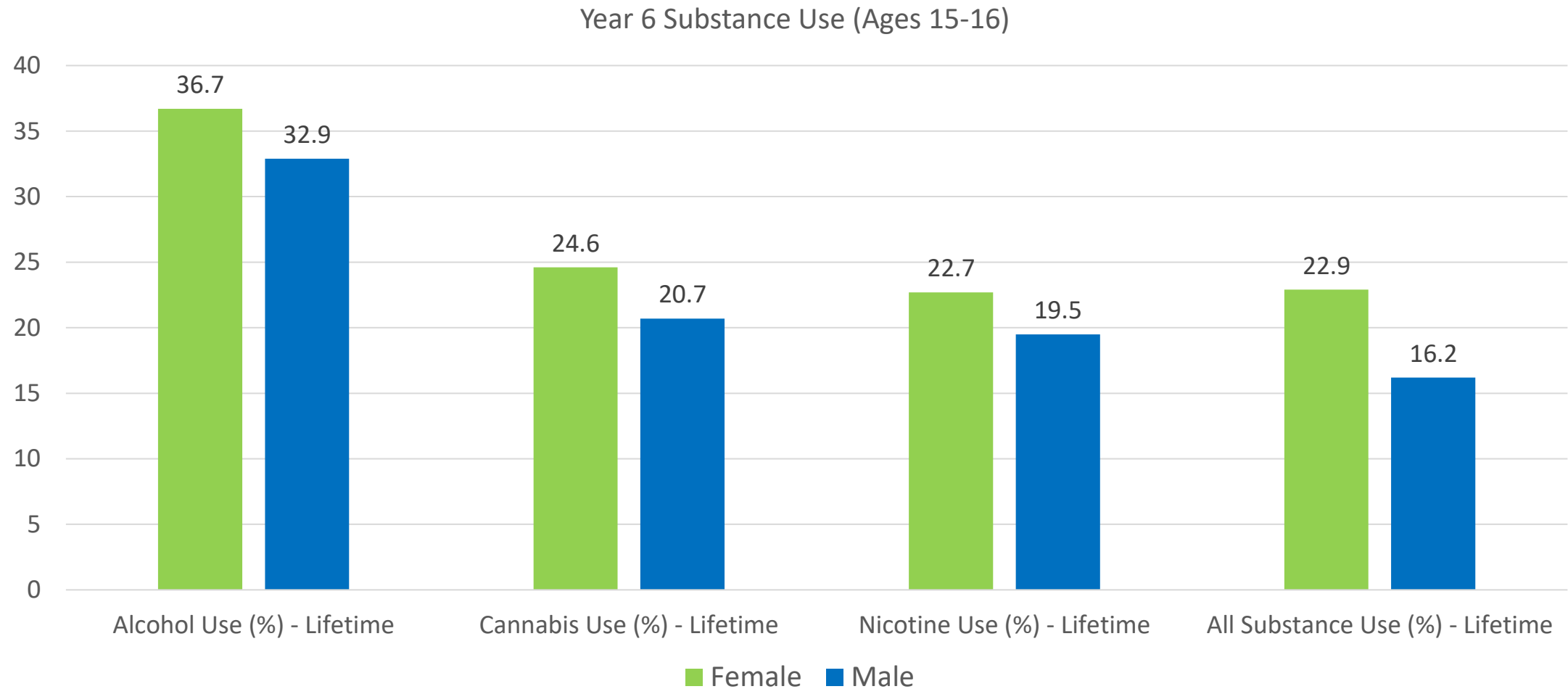


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Sex Differences in Substance Use



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Substance Use Toxicology

Any SU		
	- Hair	+ Hair
- Self	82%	9%
+ Self	7%	2%

Alcohol		
	- Hair	+ Hair
- Self	95%	2%
+ Self	3%	<1%

Nicotine		
	- Hair	+ Hair
- Self	94%	<1%
+ Self	5%	<1%

Cannabis		
	- Hair	+ Hair
- Self	92%	5%
+ Self	2%	<1%

Cocaine		
	- Hair	+ Hair
- Self	98%	2%
+ Self	0%	0%

Opiates		
	- Hair	+ Hair
- Self	99%	<1%
+ Self	<1%	0%



Predictors of Adolescent Substance Use

Stressful Live Events

Increased Depression/Anxiety

Family History of Substance Use

Peer Influence



ABCD Cohort

Substance Use Risk Factors

Prenatal Exposure to Substance Use

Difficulties at School

- Externalizing Behaviors (e.g., Detention)

Peer Approval

- Higher peer approval of substance use

Social Media Use

- e.g., Exposure to alcohol on social media



ABCD Cohort

Substance Use Resilience Factors

Longer Sleep

- Helps combat stressors linked with substance use initiation

Parental Knowledge/Monitoring

Youth Perceptions

- Higher perceived harm associated with lower SU



Acknowledgements

Thank you to the ABCD Families!!!!

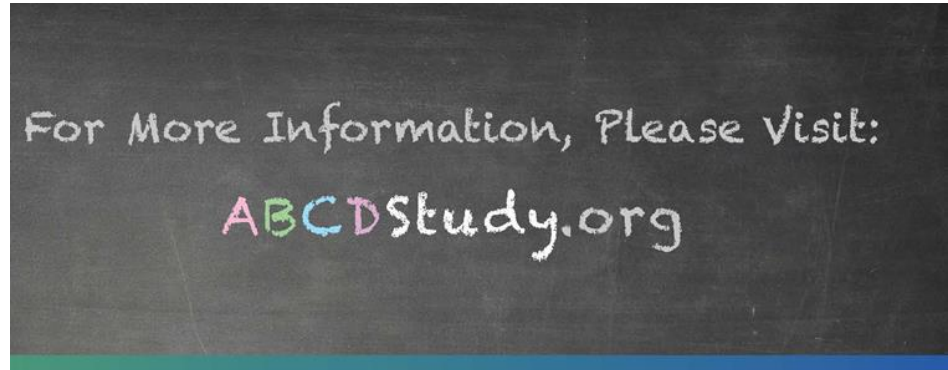
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