

# Intersection of Eating & Substance Use Disorders: Trends in Kentucky Youth

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Kentucky Hospital Association Webinar

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EATING ANXIETY TREATMENT  
LABORATORY AND CLINIC

UNIVERSITY OF  
**LOUISVILLE**  
SCHOOL OF PUBLIC HEALTH  
& INFORMATION SCIENCES

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# Objectives

- Compare and contrast eating and substance use disorders
  - Summarize eating disorders among youth in Kentucky
  - Summarize substance use among youth in Kentucky
- Highlight research findings in Kentucky
  - Share recent trends in eating disorder and substance use behaviors among Kentucky middle and high school students
  - Illustrate the clustering of eating and substance use disorders among middle school Kentucky students

# Defining Eating Disorders (EDs)

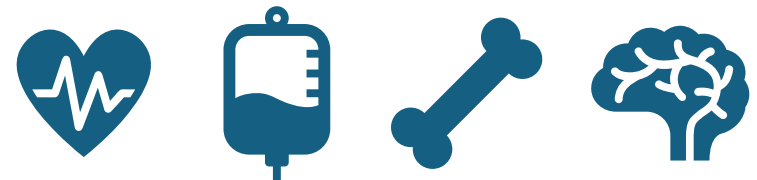
- Broad group of mental disorders with core features:
  - Behaviors like restriction, excessive or compulsive exercising, self-induced vomiting, laxative use, and pill or supplement use
  - Maladaptive thoughts and perceptions about food, weight, and body shape
- Common EDs
  - Anorexia nervosa (AN)
  - Bulimia nervosa (BN)
  - Binge eating disorder (BED)
  - Other specified feeding and eating disorders (OSFED)

# Significant Burden of Eating Disorders

- Debilitating
  - On average time from diagnosis to recovery is 10 years
  - Only 50% treatment effectiveness, with 30-40% relapse
  - Often become chronic and recurring illnesses
- High mortality rate
  - Anorexia nervosa has the second highest mortality rate of all mental disorders (only surpassed by opioid use disorders)
  - High overlap with other risk behaviors like suicidality and drug misuse

# Significant Costs of Eating Disorders

- Severe eating disorders can require inpatient and residential treatment
  - Average monthly cost of inpatient treatment is \$68,000
  - Average monthly cost of residential program is \$30,000
  - Outpatient treatment can cost upwards of \$200/session
  - Most individuals with eating disorders seek treatment in non-specialty care centers
- When left untreated, eating disorders can lead to medical complications
  - Heart failure, kidney failure, osteoporosis, diabetes, stroke, gastric rupture, hypoglycemia, and more
  - Additional costs to the Medicare system from co-occurring medical and mental illnesses and ER visits.



# Defining Substance Use Disorders (SUDs)

- Broad group of mental disorders with core features:
  - Compulsive and risky patterns of consumption associated with significant impairment
  - Maladaptive thoughts and perceptions about using substances
  - Continued use despite harm and psychosocial impairments
  - Physiological dependence
- Common SUDs
  - Alcohol use disorder
  - Opioid use disorder (hydrocodone, oxycodone, fentanyl)
  - Stimulant use disorder (cocaine, methamphetamines)
  - Cannabis use disorder
  - Tranquilizer use disorder (benzodiazepines, sedatives)

# Significant Burden of Substance Use Disorders

- Debilitating
  - On average time from diagnosis to recovery is 8-25 years
  - Average of 5 recovery attempts, with 40-60% relapse
  - Often become chronic relapsing illnesses
- High morbidity and mortality
  - Opioid use disorder has the highest mortality rate of all mental disorders (followed by anorexia nervosa)
  - High rates of medical complications (cardiovascular, metabolic, gastrointestinal, hepatic, neurological, infectious)
  - High overlap with other risk behaviors like suicidality and drug misuse

# Significant Costs of Substance Use Disorders

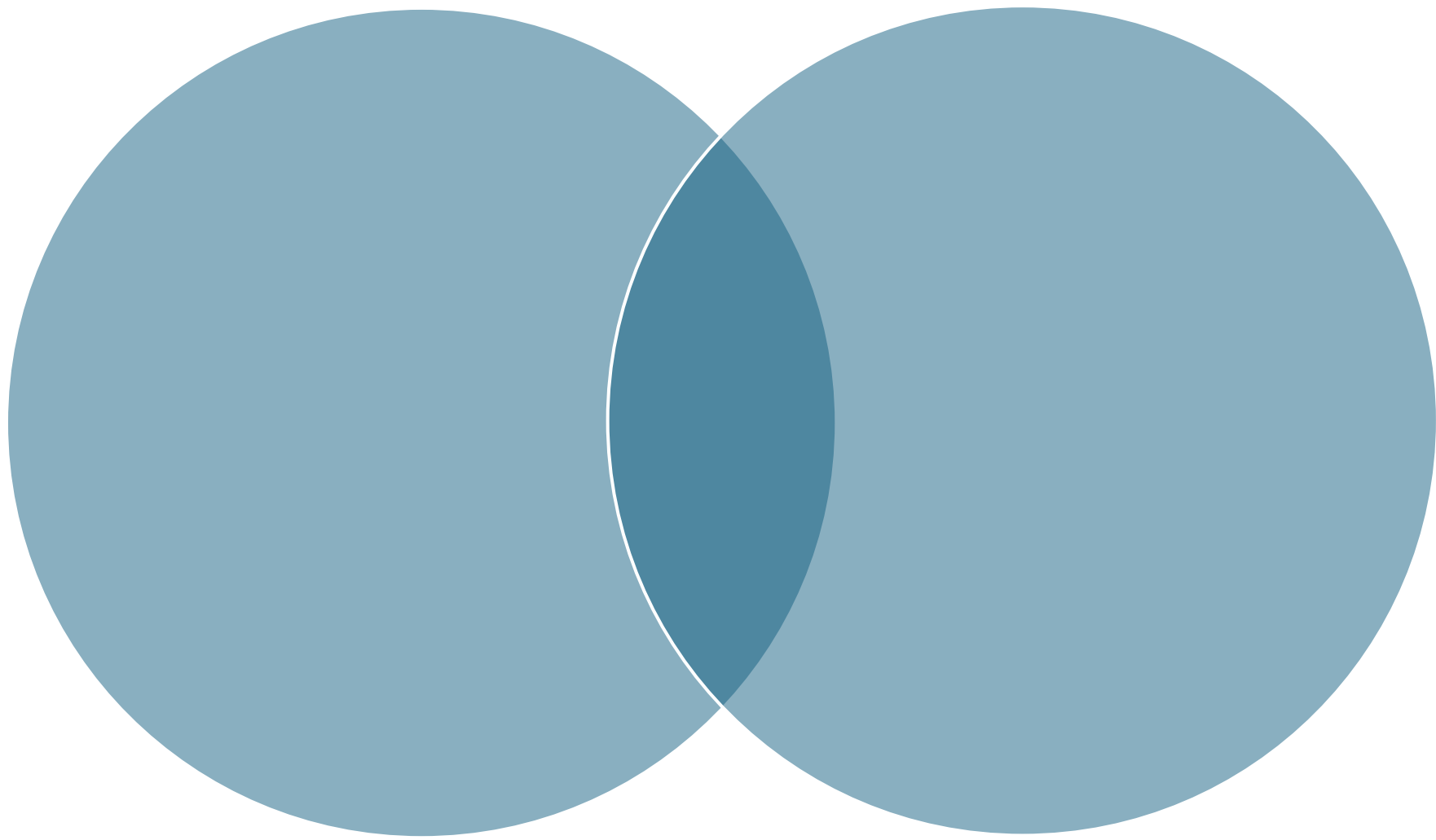
- Substance use disorders can require inpatient and outpatient treatment
  - Average monthly cost of inpatient ~\$15-60,000
  - Average monthly cost of outpatient ~\$20,000
  - Outpatient treatment can cost upwards of \$200/session
  - Most individuals with SUDs seek treatment in non-specialty care centers
- Huge costs in Kentucky
  - Combined costs of ~\$25B for OUD and overdoses
  - KY ranks 4<sup>th</sup> out of 38 in per-resident costs of OUD (\$5,941)
  - Criminal justice-involved SUD costs \$11,612 per year per person
  - Every \$1 invested in SUD treatment returns >\$3



# Intersection of Eating & Substance Use Disorders

**EDs**

**SUDs**



# Intersection of Eating & Substance Use Disorders

## EDs

### Behavioral Targets

- Body
- Food
- Eating habits
- Exercise patterns

## SUDs

### Behavioral Targets

- Licit drugs
- Illicit drugs
- Drug use equipment

# Intersection of Eating & Substance Use Disorders

## EDs

### Behavioral Targets

- Body
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- Exercise patterns

## SUDs

### Behavioral Targets

- Licit drugs
- Illicit drugs
- Drug use equipment

### Overlaps

- Mood-altering effects
- Maladaptive coping
- Functional impairments
- Comorbidities
- Social isolation
- Treatment resistance

# Intersection of Eating & Substance Use Disorders

## Psychoactive



## Non-Psychoactive



## Reasons for Use

- Maladaptive coping
- Appetite reduction
- Weight control
- Reduce inhibitions
- Enhance ED behaviors

# Examining New Eating Disorder Data

- 2023 Youth Risk Behavior Survey
  - Middle school students (N=1,481)
  - High school students (N=1,925)
- Four ED risk factors
  - Poor body image (perceive self to be overweight)
  - Weight loss (currently trying)
  - **Lifetime restriction (fasting, diet pills/supplements, vomit/laxatives)**
  - **Lifetime binge eating (loss of control)**
- Prevalence estimates overall and by eating disorder risk factors
  - Middle school: cigarettes, e-cigarettes, alcohol, cannabis, prescription drugs, cocaine
  - High school: cigarettes, e-cigarettes, alcohol, cannabis, prescription opioids, cocaine

# New Measures of Eating Disorder Risk

- **Problematic Restriction**

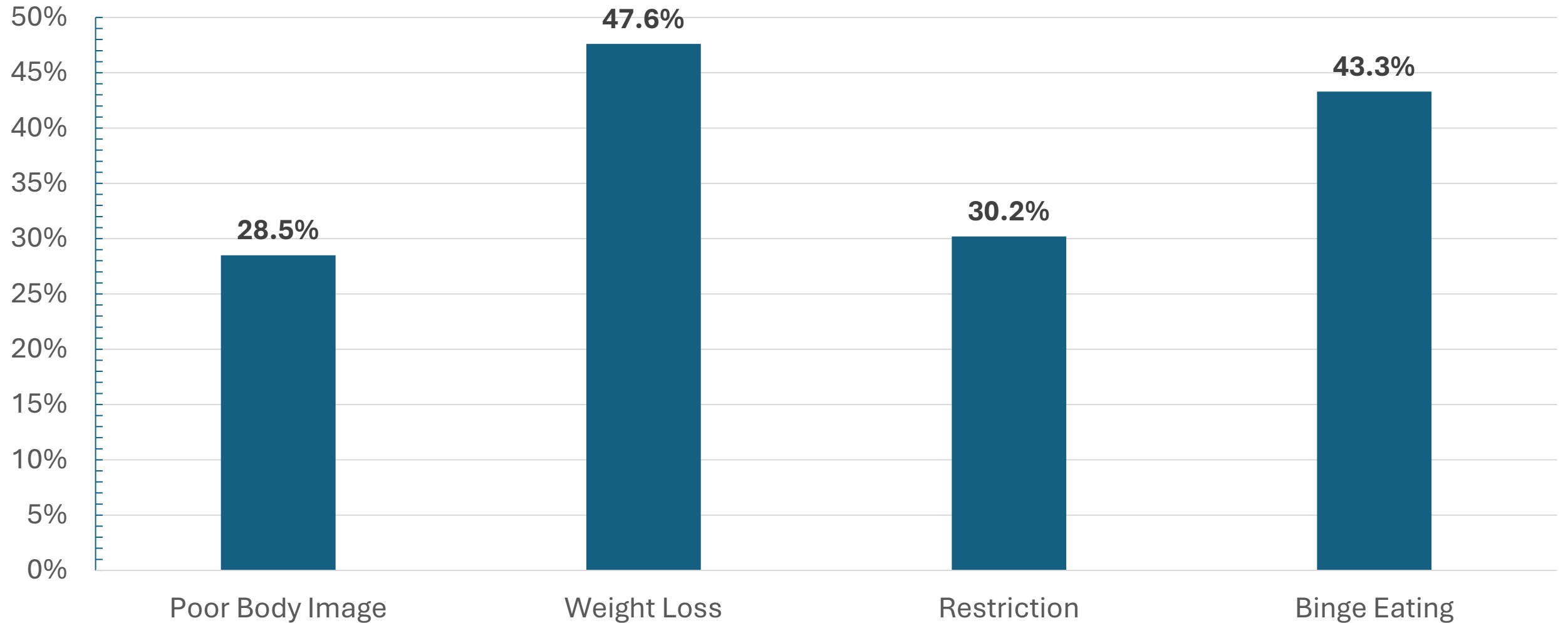
- During your life, have you ever tried to lose weight or keep from gaining weight by going without eating for 24 hours or more; taking any diet pills, powders, or liquids; vomiting or taking laxatives; smoking cigarettes; or skipping meals?

- **Binge Eating**

- During your life, have you ever eaten an amount of food that most people would consider to be very large in a short period of time, sometimes called an "eating binge?"

# Middle School

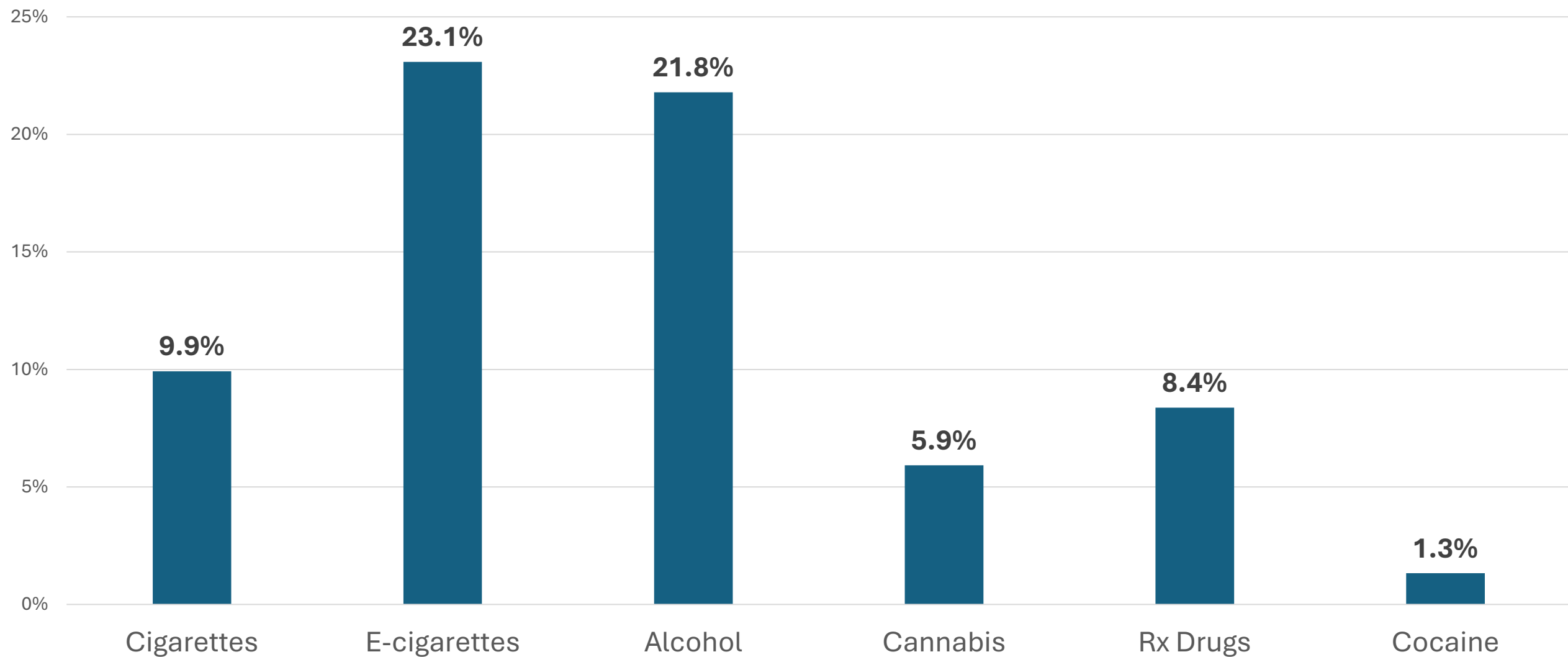
# Eating Disorder Behaviors Start Early



Data from the 2023 KY Middle School YRBS (N=1,481 students)

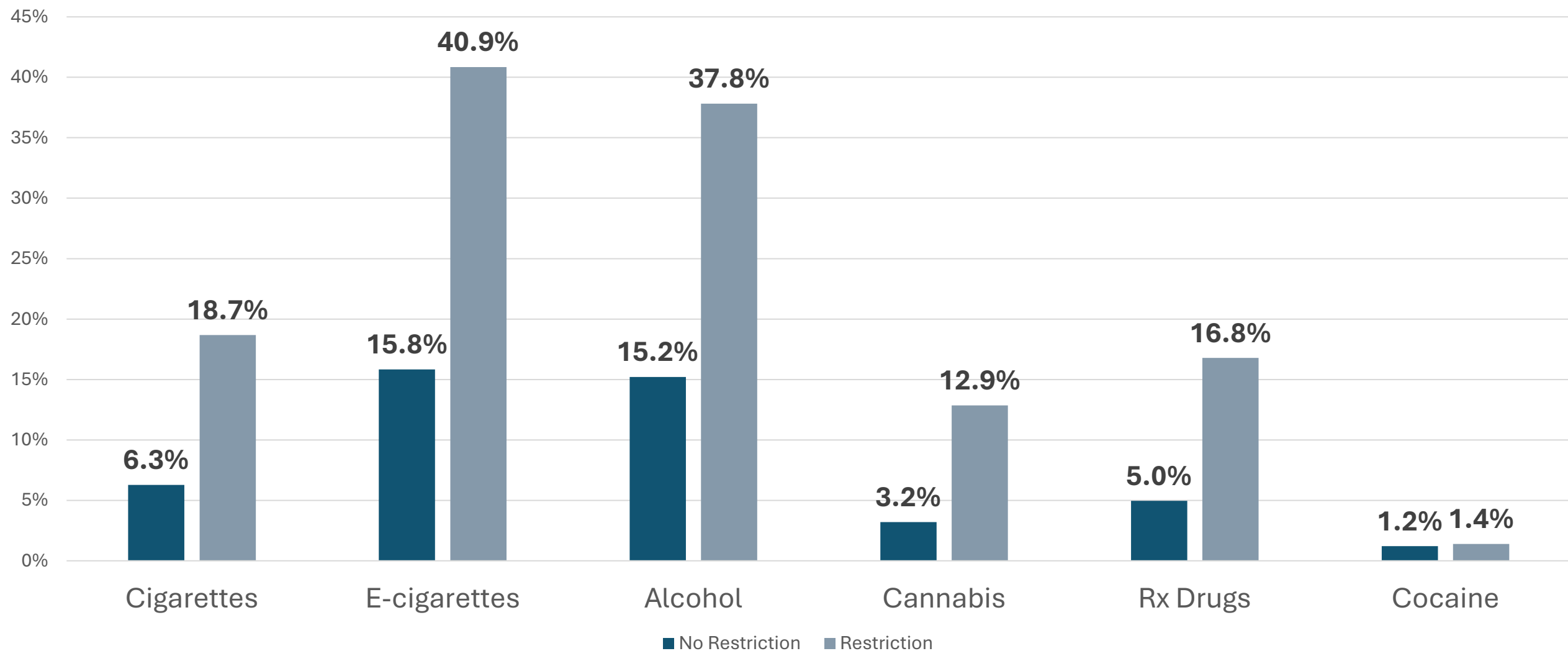


# Substance Use Behaviors Start Early



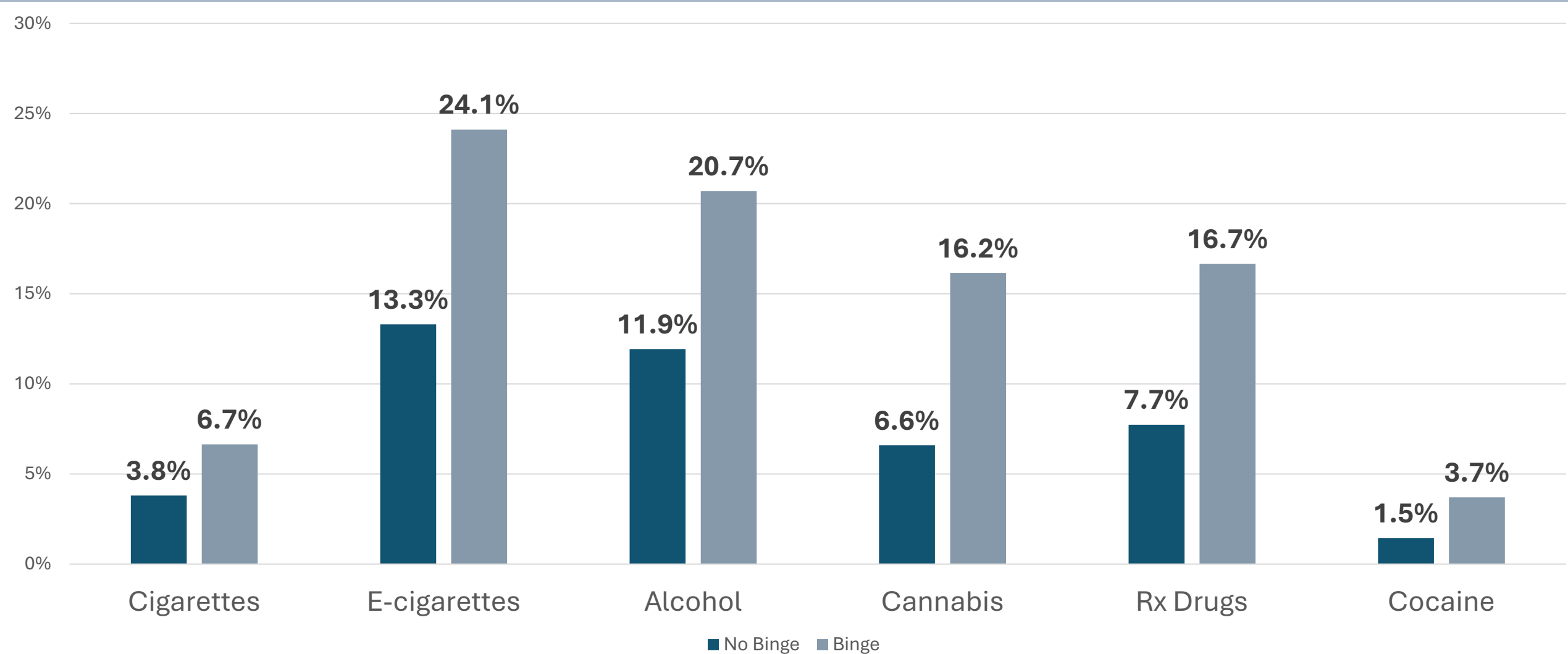
Data from the 2023 KY Middle School YRBS (N=1,481 students)

# Intersection of Substance Use & Problematic Restriction



Data from the 2023 KY Middle School YRBS (N=1,481 students)

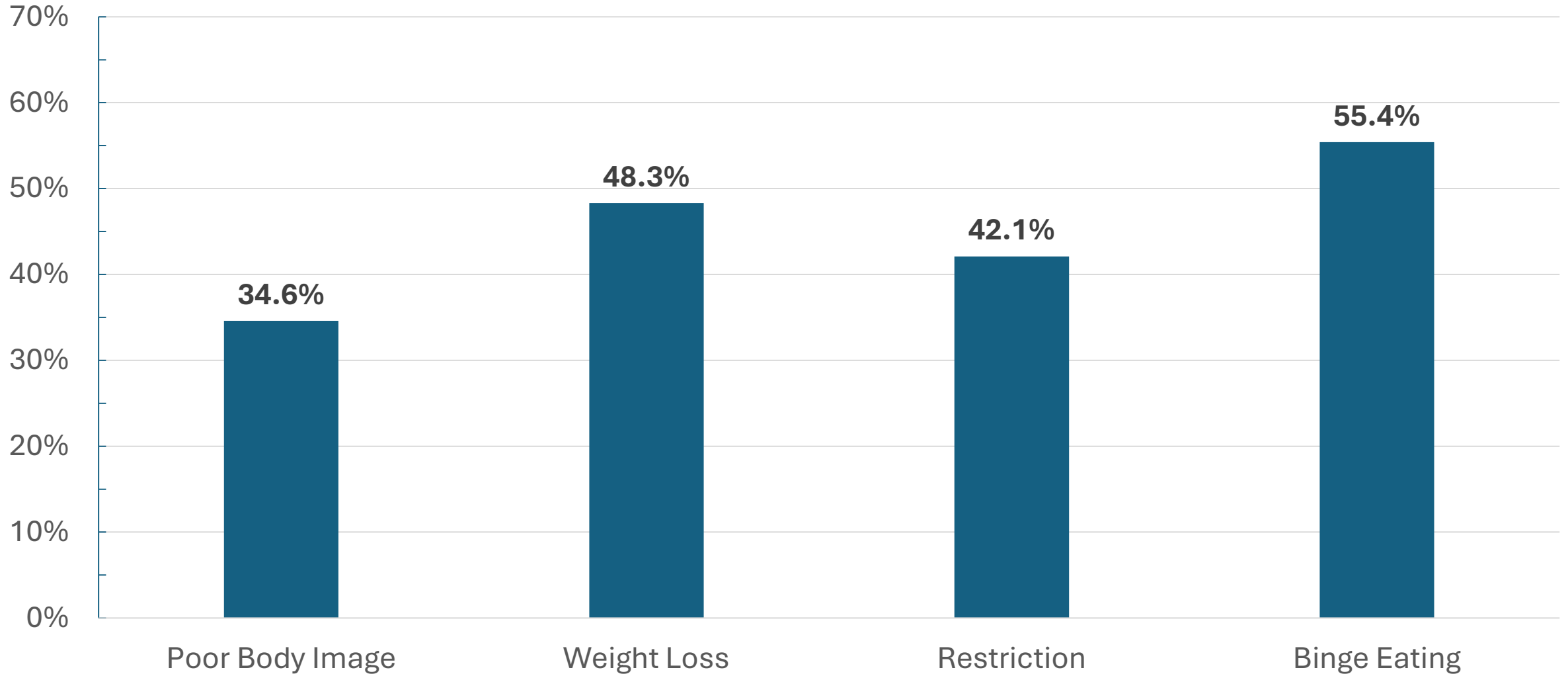
# Intersection of Substance Use & Binge Eating



Data from the 2023 KY Middle School YRBS (N=1,481 students)

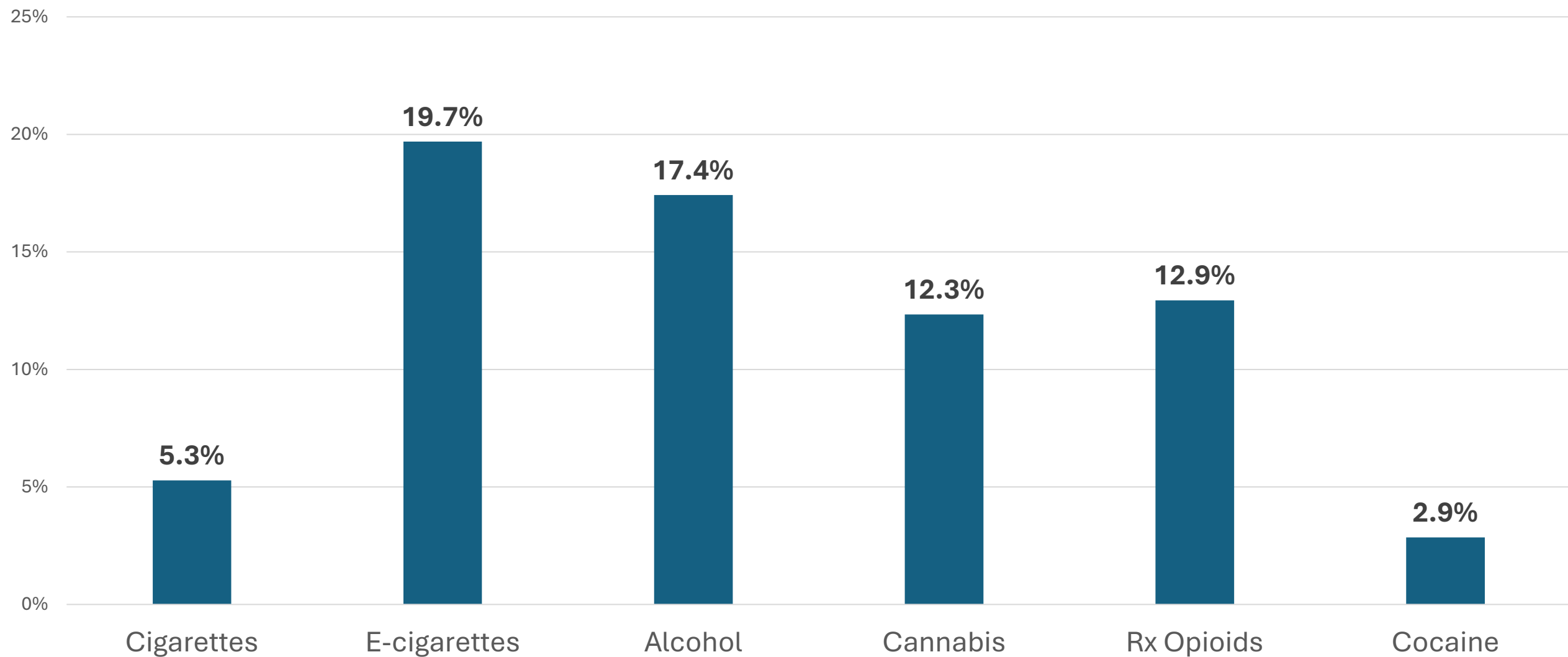
High School

# Eating Disorders Persist into Adolescence



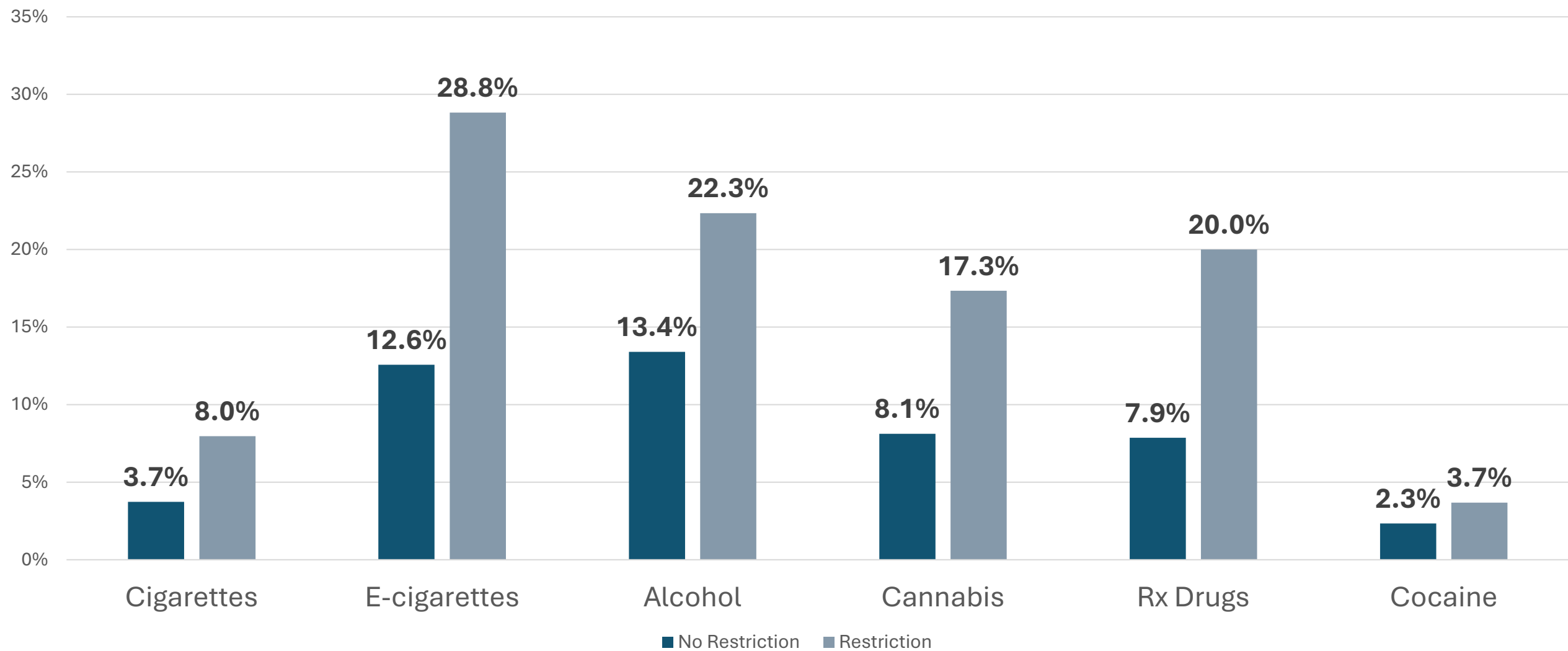
Data from the 2023 KY High School YRBS (N=1,925 students)

# Substance Use Accelerate in Adolescence



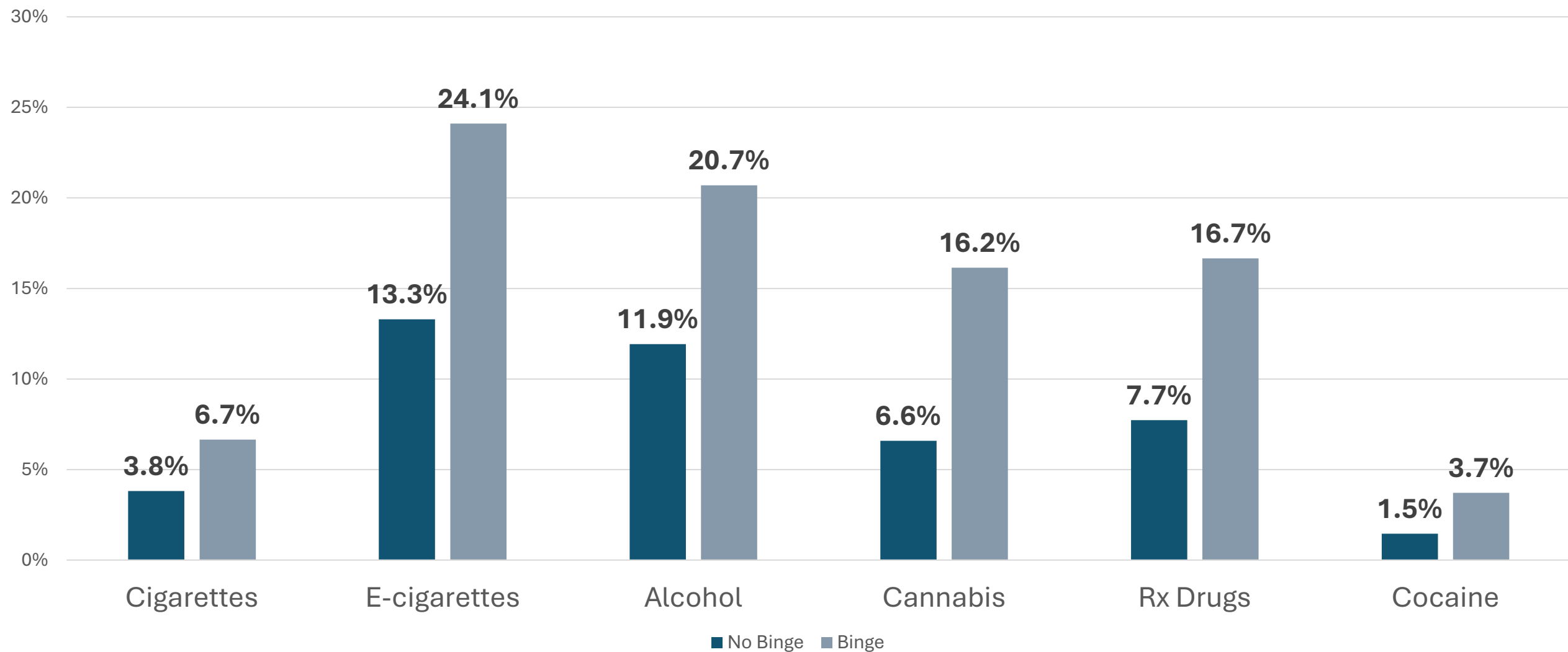
Data from the 2023 KY High School YRBS (N=1,925 students)

# Intersection of Substance Use & Problematic Restriction



Data from the 2023 KY High School YRBS (N=1,925 students)

# Intersection of Substance Use & Binge Eating



Data from the 2023 KY High School YRBS (N=1,925 students)



# Clustering of Eating Disorders & Substance Use



SPECIAL ISSUE

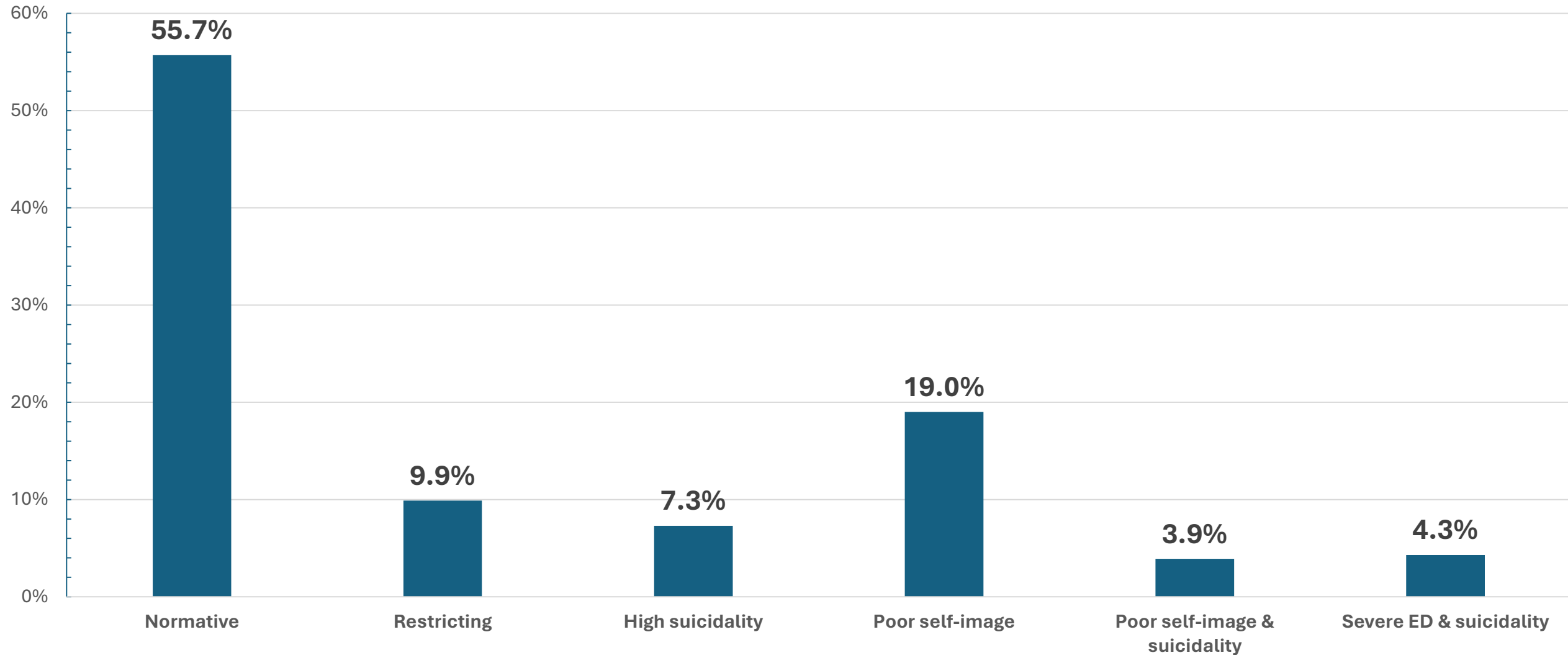
**Leveraging general risk surveillance to reduce suicide in early adolescents: Associations between suicidality, disordered eating, and other developmental risk factors**

Rowan A. Hunt BA<sup>1</sup>  | Cheri A. Levinson PhD<sup>1</sup>  | Nicholas C. Peiper PhD, MPH<sup>2,3</sup>

# Study Description

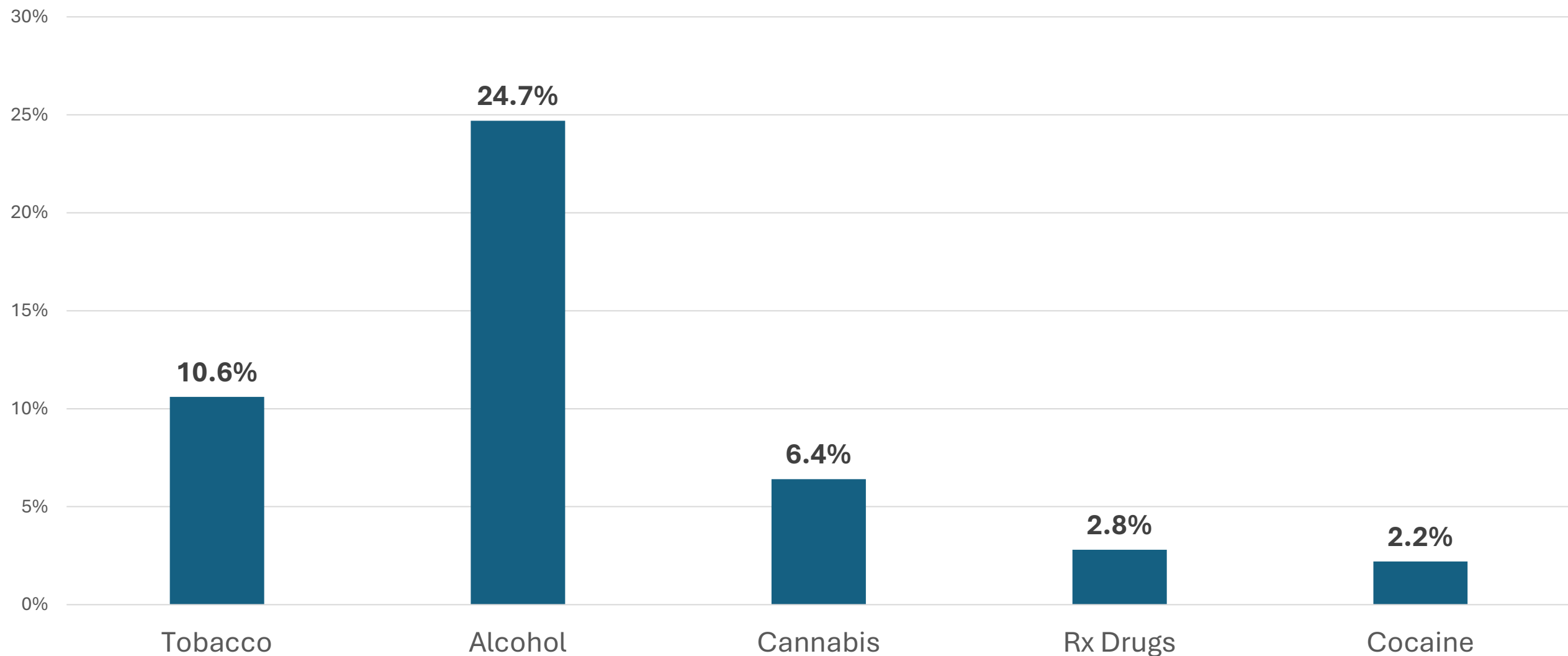
- 2011-2013 middle school YRBS (N=3,811)
- 5 eating disorder and 3 suicide behaviors
  - Poor body image, weight loss, fasting, pills/supplements, purge
  - Suicide ideation, plan, and attempts
- Analytical approach: Latent class analysis of the 8 items
  - Identify youth subpopulations based upon the 8 items
  - Examine lifetime prevalence of substance use among the identified subpopulations
    - Tobacco (cigarettes, smokeless)
    - Alcohol
    - Cannabis
    - Prescription drug (opioid, stimulant, tranquilizer)
    - Cocaine

# Six Youth Subgroups Identified



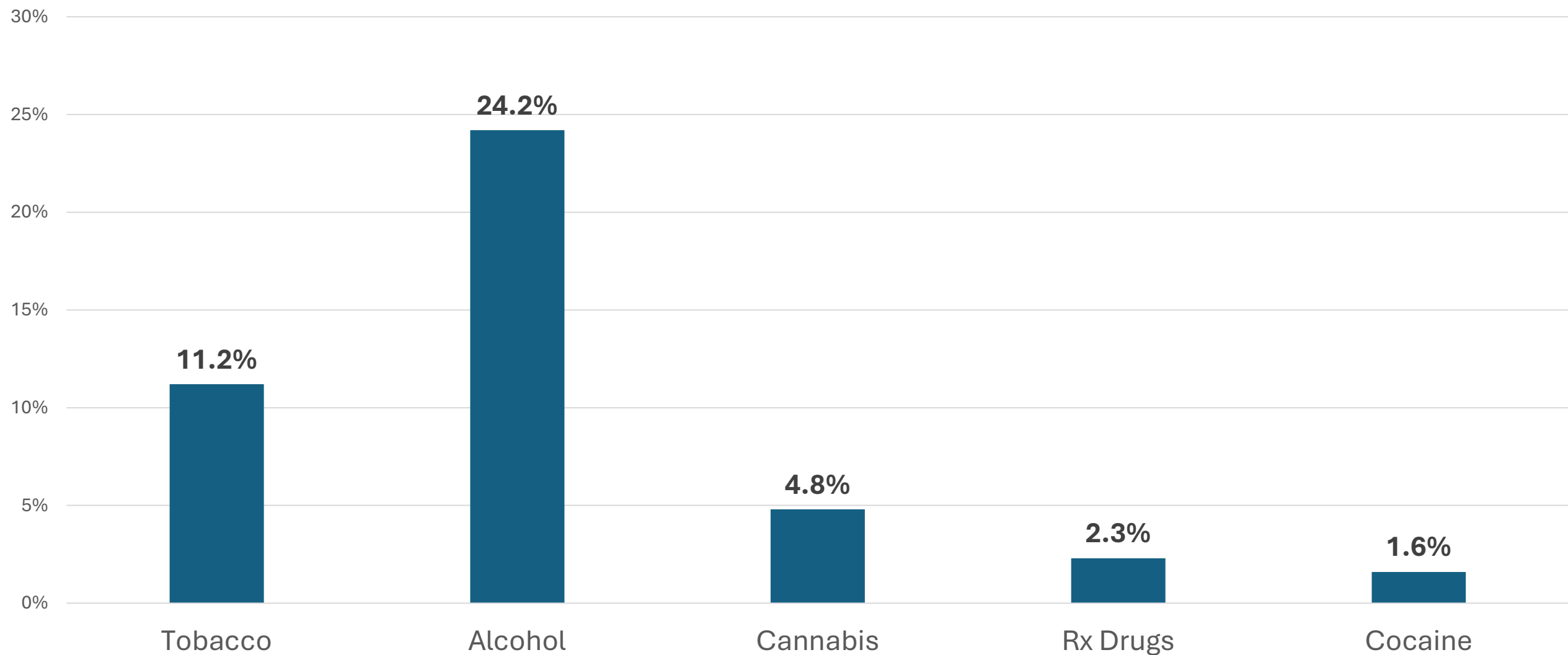
Data from the 2009-2011 KY Middle School YRBS (N=3,811 students)

# Substance Use Among Normative Youth (56%)



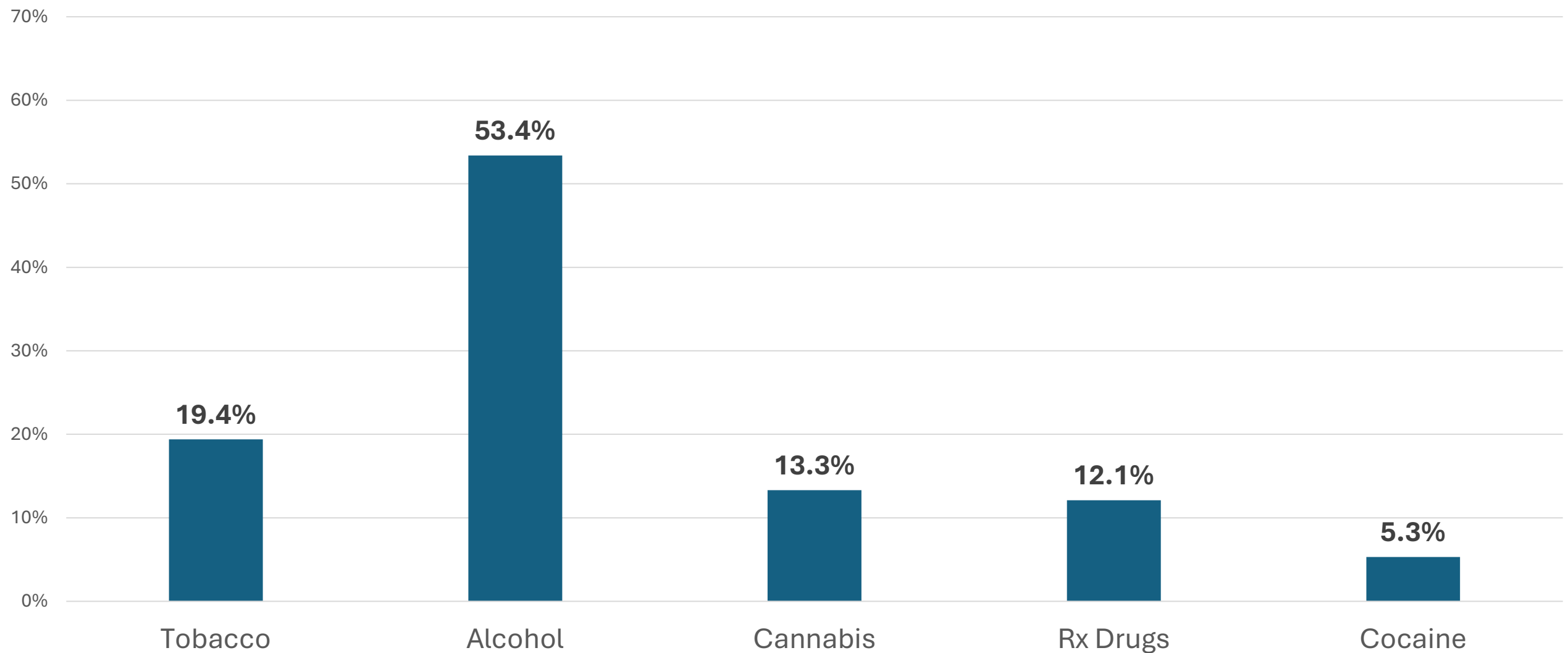
Data from the 2009-2011 KY Middle School YRBS (N=3,811 students)

# Substance Use Among Youth with Poor Self-Image (19%)



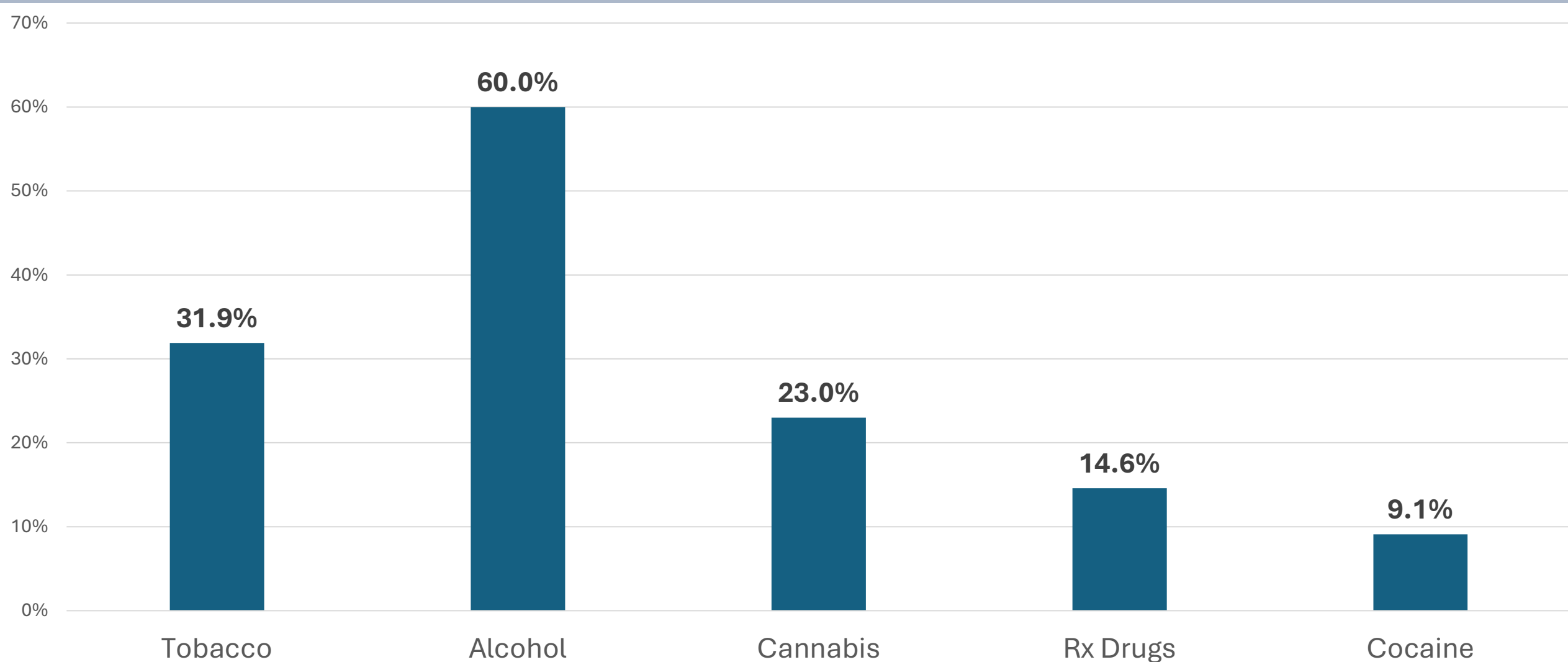
Data from the 2009-2011 KY Middle School YRBS (N=3,811 students)

# Substance Use Among Restricting Youth (10%)



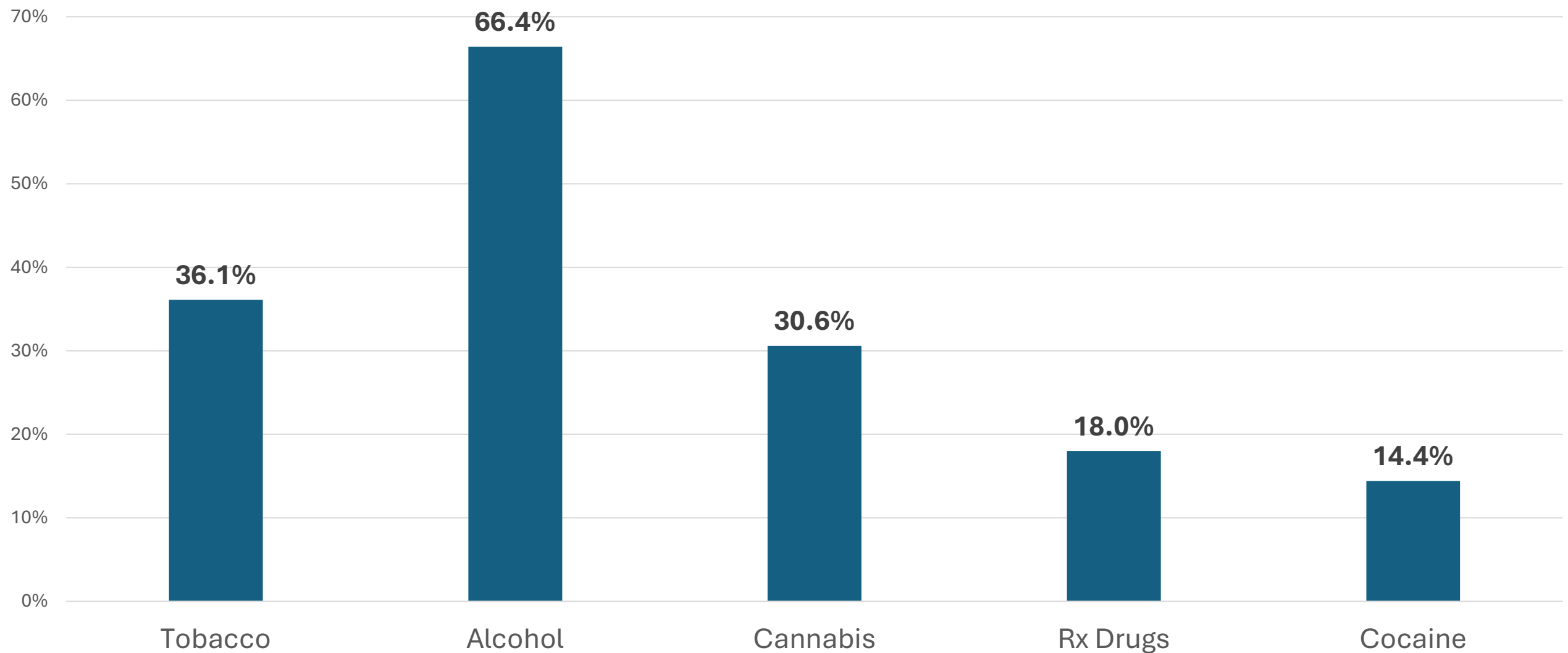
Data from the 2009-2011 KY Middle School YRBS (N=3,811 students)

# Substance Use Among Youth with Poor Self-Image and High Suicidality (4%)



Data from the 2009-2011 KY Middle School YRBS (N=3,811 students)

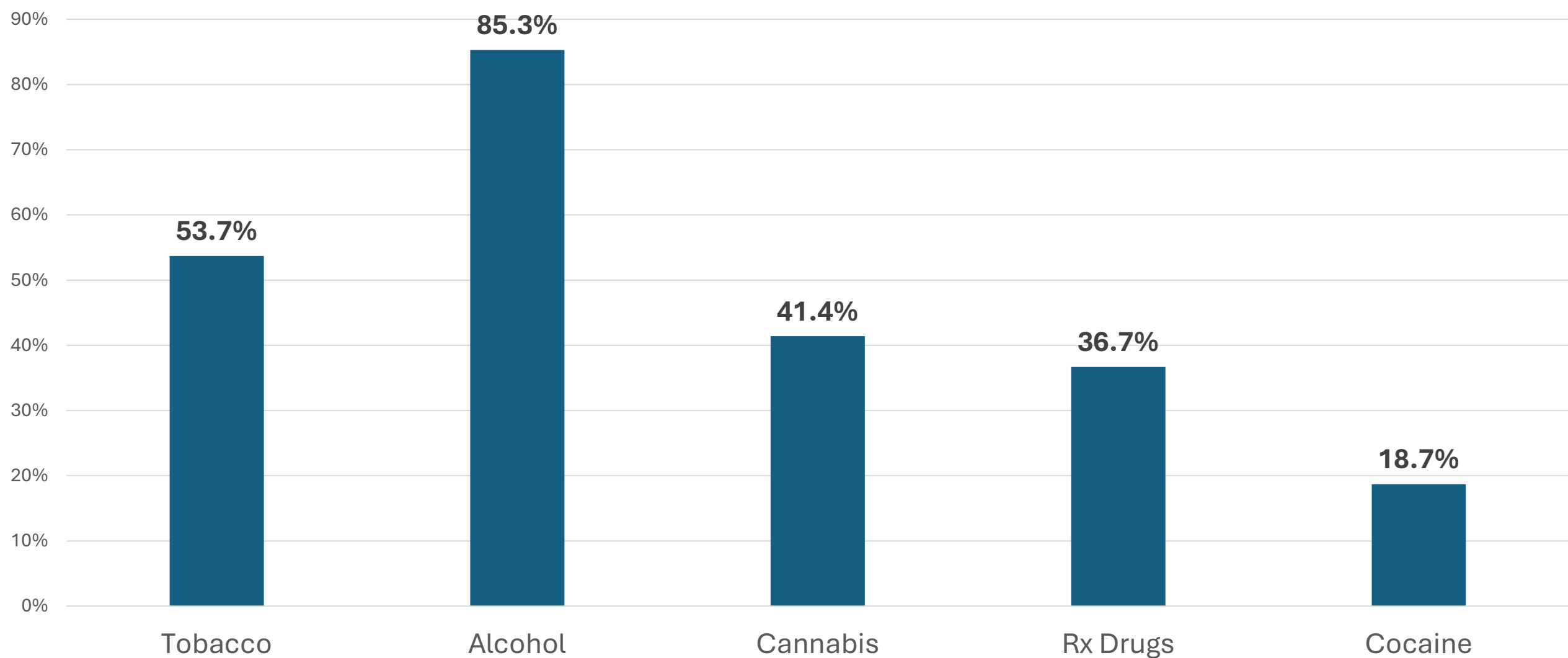
# Substance Use Among Youth with High Suicidality (7.3%)



Data from the 2009-2011 KY Middle School YRBS (N=3,811 students)



# Substance Use Among Youth with Severe Eating Disorder and Suicide Risk (4.3%)



Data from the 2009-2011 KY Middle School YRBS (N=3,811 students)

# Conclusions

- EDs and SUDs both chronic and debilitating disorders
  - Main differences are the behavioral targets
  - Significant overlaps with coping, mood-altering, impairments, comorbidities, and treatment resistance
- Both disorders emerge in childhood and adolescence
  - Risk factors highly prevalent in Kentucky youth
  - Neither happen in isolation: co-occurrence the rule, not the exception

# Additional Resources

- National Suicide Helpline: 988
- Crisis Text Line: Text “HOME” to 741-741
- National Alliance for Eating Disorders Helpline: 1 (866) 662-1235
- <https://www.louisvilleeatlab.com/>
- <https://www.theprojectheal.org/meal-support>
- <https://map.nationaleatingdisorders.org/>
- <https://www.samhsa.gov/national-center-excellence-eating-disorders-nceed>
- <https://www.nimh.nih.gov/health/topics/eating-disorders>

# Disclosures

- Dr. Peiper reports research support from the National Institutes of Health, CDC Foundation, Gilead Sciences, and Abbott Laboratories.
- Dr. Peiper reports scientific consultancy fees from Meru Health.



Thank you!

**Clinical Treatment &  
Research Opportunities for  
Individuals with Eating  
Disorders are Available!**



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