

# Analyzing the Impacts of Co-Occurring Mental Health and Substance Use Disorders on Youth’s Criminal Activity

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## Abstract

A co-occurring disorder refers to the presence of both a mental health disorder as well as a substance use disorder. It is estimated that over 60% of youths with a mental health disorder also have a substance use disorder (Shufelt & Coccozza, 2006).

Due to the lack of research on youths and their criminal activity patterns, this project aims to examine the relationship between the presence of a variety of disorders and the amount of engaged criminal activity. Furthermore, external factors are being assessed to determine their impacts on criminal activity.

## Introduction

The Pathways to Desistance Study followed 1,354 participants from Philadelphia, Pennsylvania or Phoenix, Arizona. Participants had to commit a serious offense between the ages of 14 and 18 to be accepted.

Disorder	Mean Age	Male	Female
Both	16.3	92	20
Substance Use	16.2	317	41
Mental Health	16.0	60	22
None	16.0	701	101

Participants were separated by disorder.

- Mental health symptoms in their lifetime
- Substance use symptoms in the past year

## Acknowledgements

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## Methods & Materials

Due to the right skew of the criminal frequency variable, a log transformation was applied. A linear model was fit, and a backward stepwise algorithm was used to decrease the number of variables included in the model. All interaction terms were then added to the optimized model and a backward stepwise algorithm was used once again resulting in the final model.

Disorder	Parental Monitoring	Parental Knowledge	Violence Exposure	Peer Behavior	Age During 1st Offense	Criminal Frequency
Both	2.7 (0.9)	2.5 (0.8)	7.5 (2.7)	2.9 (0.8)	10.0 (1.6)	351.8 <sup>a</sup> (564.3)
Substance Use	2.6 (0.8)	2.5 (0.8)	6.0 (2.8)	2.8 (0.8)	10.2 (1.7)	229.4 <sup>a</sup> (410.7)
Mental Health	2.9 (0.7)	2.6 (0.8)	6.0 (2.5)	2.4 (0.9)	10.5 (1.9)	177.5 <sup>b</sup> (467.7)
None	2.9 (0.9)	2.9 (0.8)	4.5 (2.8)	2.0 (0.9)	10.6 (1.9)	95.4 <sup>b</sup> (299.3)

\* The table above depicts mean values with standard deviations in parenthesis.  
\* Lower criminal frequency, peer behavior, and violence exposure scores are better while parental monitoring scores are better.  
\* Superscripts depict Tukey’s method which was used to differentiate which disorders significantly differ from each other using a significance level of  $\alpha = 0.05$ .

## Results

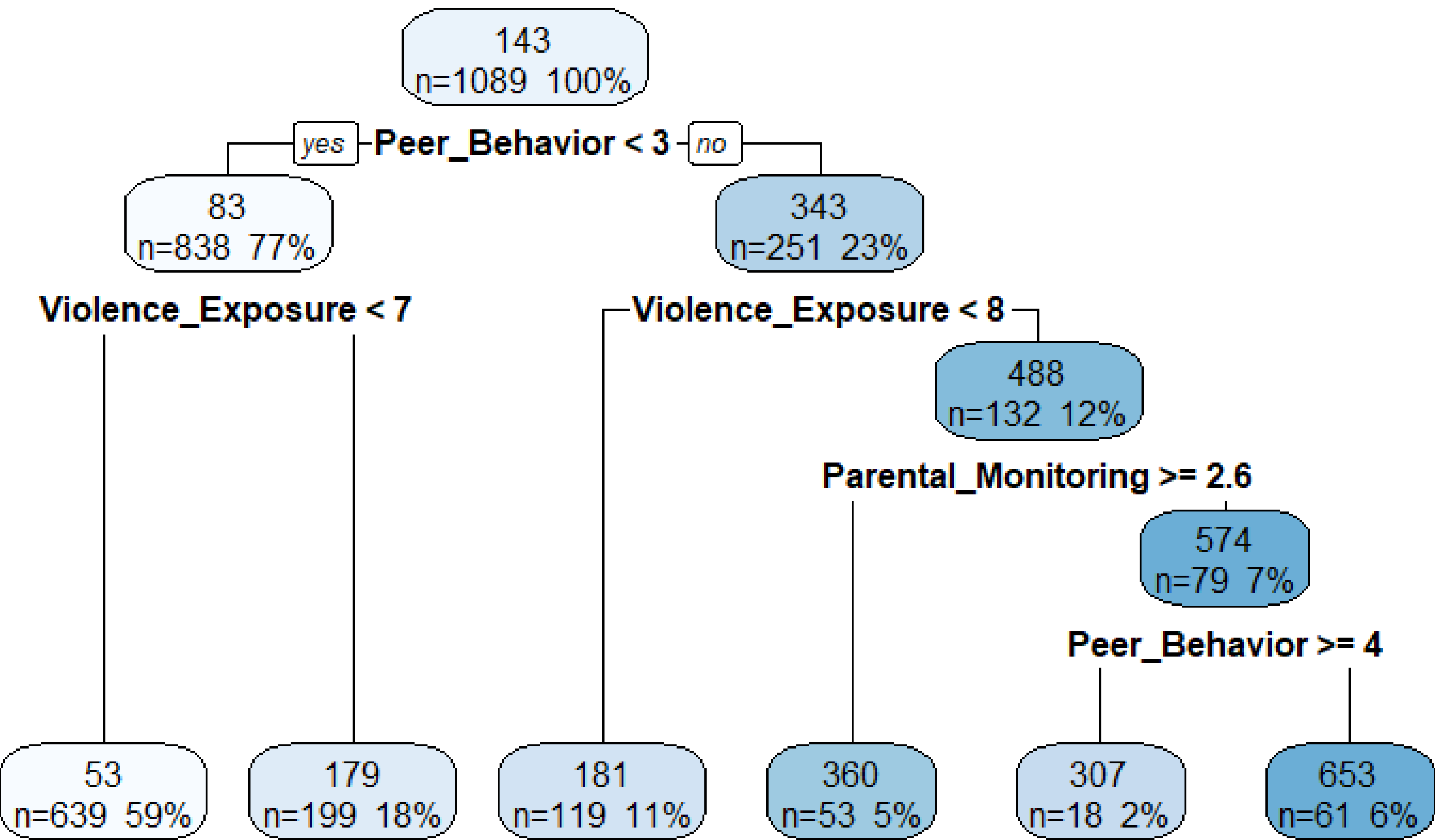
The following factors account for 36.7% of the variability in criminal activity:

### Main Effects:

- Substance use
- Mental health
- Peer behavior
- Violence exposure
- Parental monitoring
- Parental knowledge
- Age during 1<sup>st</sup> offense

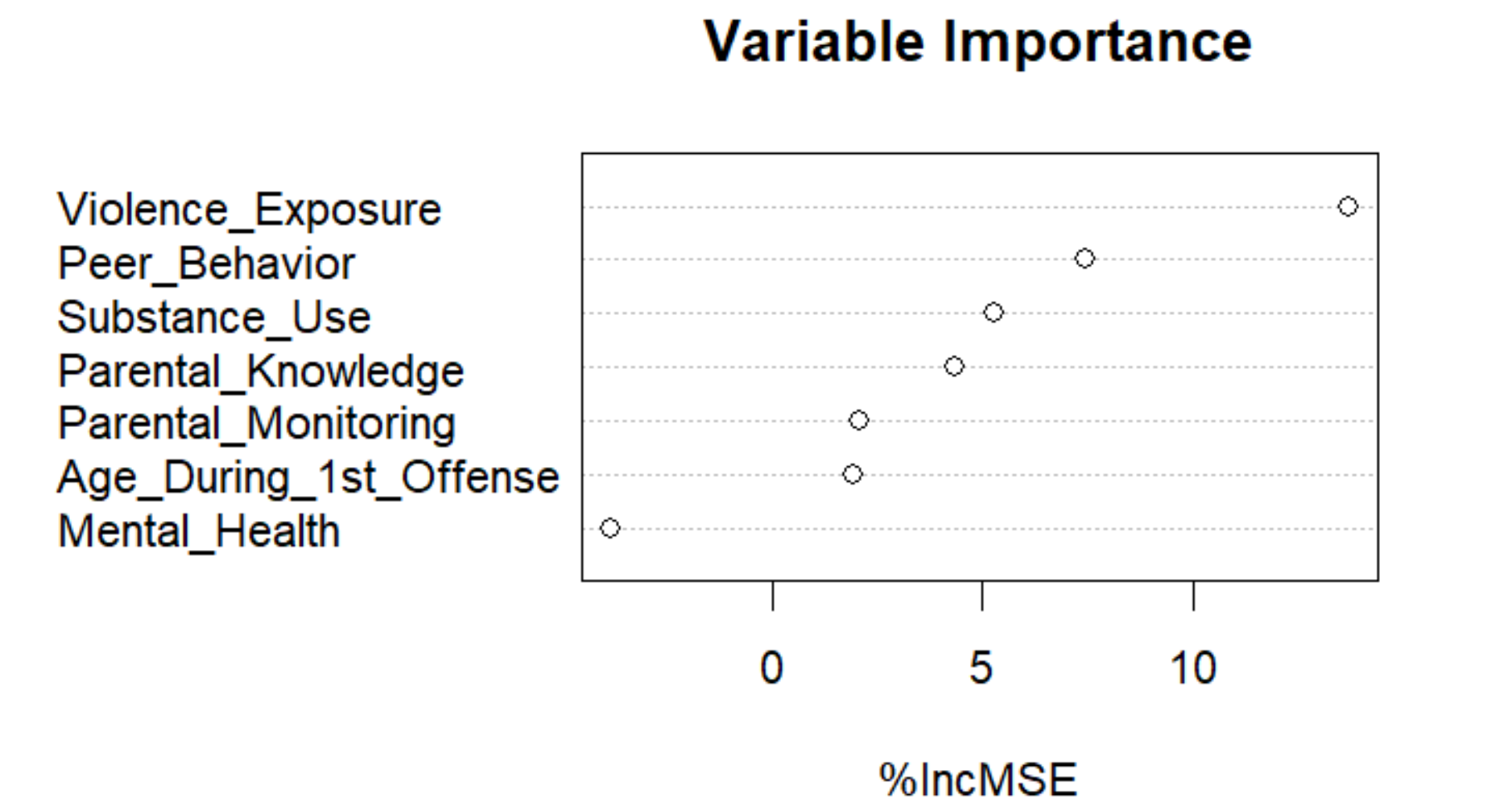
### Interactions:

- Substance use & mental health
- Peer behavior & mental health
- Peer behavior & age during 1<sup>st</sup> offense
- Peer behavior & parental monitoring
- Parental knowledge & parental monitoring



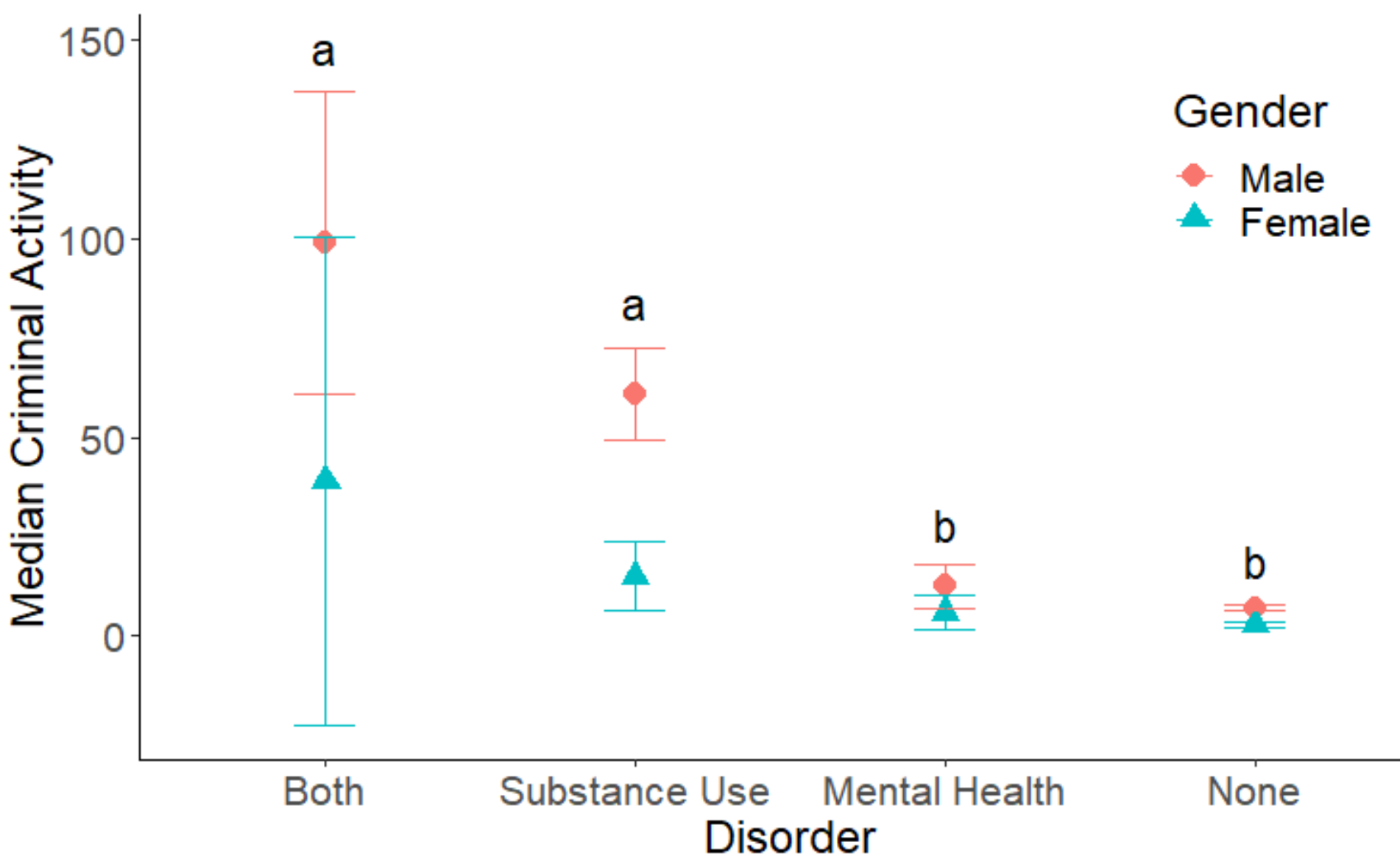
## Conclusions

Based off the study’s findings, the protocol surrounding the safety of children in violent households must be taken more seriously. Parental monitoring and knowledge should be increased, with the hopes that negative peer influence and age during 1<sup>st</sup> offenses can be minimized and lowered.



## Factor Impacts

Youths with co-occurring mental health and substance use disorders are typically monitored less by their parents, engage in activities that their parents are unaware of, witness more violence, experience more negative peer influences, and commit their first crimes at younger ages compared to youths with one or no disorders leading to higher crime rates.



## References

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