

# Sex Differences in Emotion Dysregulation and Impulsivity: Implications for Youth in the Legal System and Family Dynamics

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## Introduction/Background

- Impulsivity and emotion regulation are two key psychological factors influencing decision-making and behavior, particularly in vulnerable populations such as youth in the legal system (YLS).
- Impulsivity is more than just making risky decisions; it involves difficulties in delaying gratification, acting hastily under emotional pressure, and struggling with long-term planning.
- Deficits in emotion regulation increase impulsive decision-making, making youth more vulnerable to delinquent behavior.
- While prior research has examined impulsivity in justice-involved youth, there is a gap in understanding how impulsivity and emotion regulation interact across sexes.
- This study aims to fill the gap in existing research by analyzing data on youth in the legal system, offering insights that can inform future policy and intervention strategies.
- Research Questions: Do male youth in juvenile justice centers exhibit higher levels of impulsivity compared to female youth, particularly in decision-making scenarios? Do female youth report lower rates of dysregulation, potentially due to differences in family dynamics or substance use?

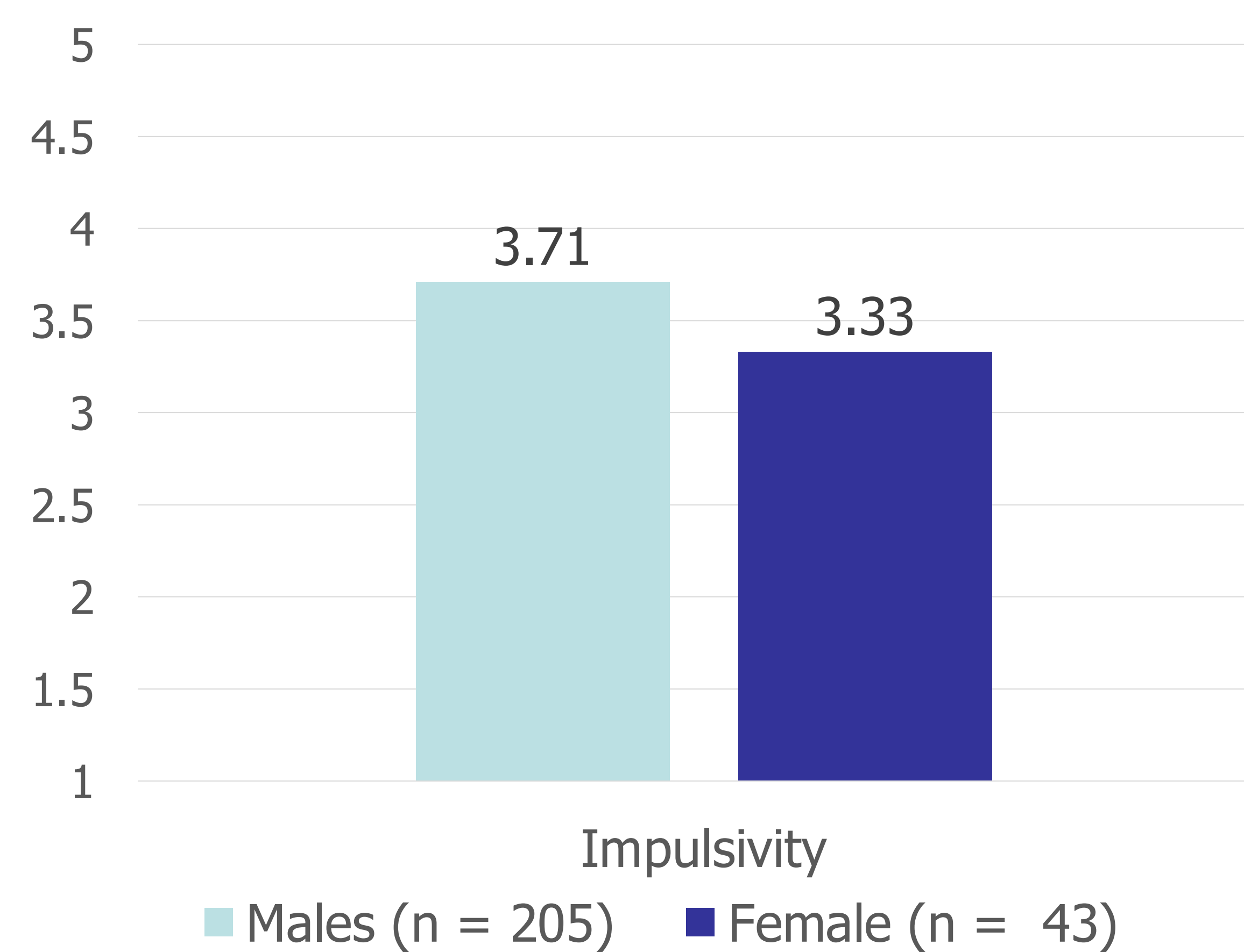
## Methods

- Baseline data were collected as part of the Leveraging Safe Adults (LeSA) project, which was a five-year longitudinal study examining the effectiveness and implementation of an intervention in preventing opioid and substance use among youth after their discharge from residential juvenile justice facilities.
- Participants were YLS (N=248) ranging from 14 to 18 years (M=16, SD=1.01). Participants were 79.9% male, 20.1% female; Ethnicity: 54.0% non-Hispanic; Race: 34.9% White, 30.2% Black, 16.4% more than one, 14.8% other, 2.6% American, Indian/Alaska Native, 0.5% Asian, 0.5% Hawaiian.
- Measures included the Delayed Discounting Task (DD; Impulsivity) a 12-item interviewer-delivered screening task; State Difficulties in Emotion Regulation Scale (S-DERS; Emotion Dysregulation) a 21-item self-report assessment; TCU Drug screen 5 (TCUDS) -17-item based on DSM-5 criteria; Family Assessment Device (FAD) a 44-item self-report.
- Substance use disorder was scored based on first 12-items of TCUDS.
- Substance use was based on use prior to entering facility. DD, S-DERS, and FAD indicate participants states and perceptions at the time of data collection while in facility.
- Hypotheses were tested through independent t-tests and Pearson's correlation analyses.

## Results

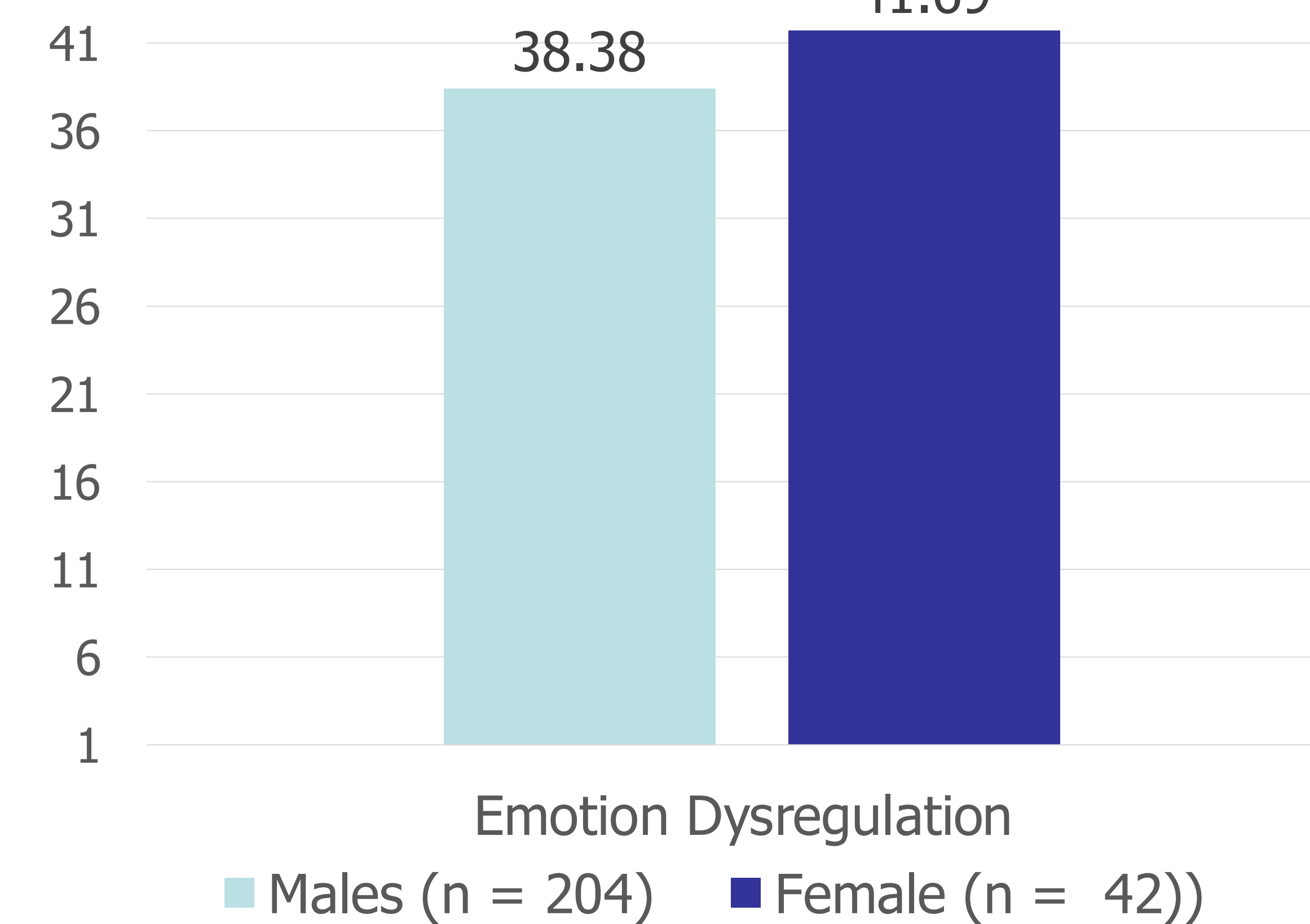
### Sex Differences in Impulsivity and Dysregulation

Differences in Impulsivity



When comparing mean differences in impulsivity between male and female youth, results indicated no significant difference,  $t(63.79) = .678, p = .500$ .

Differences in Emotion Dysregulation



When comparing mean difference of sex on reported emotion dysregulation results indicated there was no significant difference.  $t(49.409) = -1.335, p = .188$ .

### Relationships Among Variables

Variable	1	2	3	4
1. Impulsivity	-	.107	.003	-.024
2. Emotion Dysregulation	.107	-	.259**	.102
3. Family - General Functioning	.003	.259**	-	.148*
4. TCU-DS Substance use disorder	-.024	.102	.148*	-

\*\* Correlation is significant at the 0.01 level (2-tailed). \* Correlation is significant at the 0.05 level (2-tailed).

Further analyses examined the relationship between dysregulation and impulsivity in connection to social factors, family assessment devices, and substance use. Results indicated that emotional dysregulation (S-DERS) was significantly associated with poorer general functioning ( $r = .259, p < .01$ ), while lower general functioning was weakly linked to increased substance use ( $r = .148, p < .05$ ). However, no significant relationships were found between delayed gratification difficulties (impulsivity) and the measured variables ( $r = .107$  to  $-.024, p > .05$ ), suggesting that impulsivity may not be a key factor in these associations for this sample.

## Conclusion/Discussion

- The study found no significant differences between males and females in emotion dysregulation or delayed discounting, suggesting that these factors may not be strongly influenced by sex.
- The significant correlation between family functioning and emotional dysregulation highlights the importance of a supportive family environment in developing effective emotional coping strategies.
- The link between emotion dysregulation and substance use underscores the need for interventions aimed at improving emotional coping skills, potentially reducing the risk of substance abuse.

## Limitations & Future Direction

- Despite the valuable insights gained, this study has several limitations. Potential biases, such as self-report or sampling biases, should be carefully addressed to enhance the validity of results.
- Furthermore, the generalized ability of these findings is limited, as the study focused specifically on youth in the legal system rather than youth in general. Additionally, since data were collected from only two states, the results may not be fully representative of all youth within the legal system.
- Causal relationships cannot be definitively established due to the cross-section design of this study, emphasizing the necessity of longitudinal and experimental approaches in future investigations. Rather than focusing exclusively on sex differences, future interventions should adopt a broader, more comprehensive approach.
- Crucially, family functioning maybe a pivotal factor in emotion regulation. Future interventions should integrate family dynamics to maximize their effectiveness in improving emotional outcomes. By incorporating a holistic framework, researchers and practitioners can develop more impactful and sustainable strategies for fostering emotional well-being.

## Acknowledgments



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### References

Arantes, J., Berg, M. E., Lawlor, D., & Grace, R. C. (2013). Offenders have higher delay-discounting rates than non-offenders after controlling for differences in drug and alcohol abuse. *Legal and Criminological Psychology, 18*(2), 240-253.  
Konecky, B., & Lawyer, S. R. (2015). Steeper delay discounting among substance-abusing and substance-dependent adolescents versus controls. *Journal of Child & Adolescent Substance Abuse, 24*(4), 207-211. <https://doi.org/10.1080/10678265.2013.728893>  
Lerner, R. M., & Steinberg, L. (Eds.). (2009). *Handbook of adolescent psychology: volume 1: Individual bases of adolescent development* (Vol. 1). John Wiley & Sons.  
Zimmermann, P., & Iwanaki, A. (2014). Emotion regulation from early adolescence to emerging adulthood and middle adulthood: Age differences, gender differences, and emotion-specific developmental variations. *International Journal of Behavioral Development, 38*(2), 182-194.