

# The Effect of Instagram Usage on the Loss of Control Of Eating: Anxiety and Emotional Reactivity as Moderators

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## Background

- Previous research has shown that the use of technology and social media, in their different available forms, may have detrimental effects on the physical and mental well-being of adolescents and young adults such as eating disorders (Zeeni, Doumit, Kharma, Jose sanchez- Ruiz, 2018).
- These eating disorders may include binge eating, which is accompanied by a large amount of food intake over time and a loss of control (Yu, 2020).
- Social Anxiety and Emotional Reactivity have been shown to have an effect on how adolescents use these social media apps and internalize their feelings (Schneider, 2019).

## Hypotheses

At times when teen's **use Instagram more than their average amount**, they will have **increased binge eating** behavior.

This effect will be **stronger** for:  
 a). Teens with more social anxiety  
 b). Teens with higher levels of emotional reactivity

## Methodology

### Instagram Usage:

- **Technology Use Questionnaire** assesses how much time adolescents engage with technology and social networking sites on an average/typical weekend day.

### Loss of Control Eating:

- Measures adolescents' experiences related to loss of control eating behaviors in the past 28 days  
 Example: "I continued to eat past the point when I wanted to stop"

### Social Anxiety:

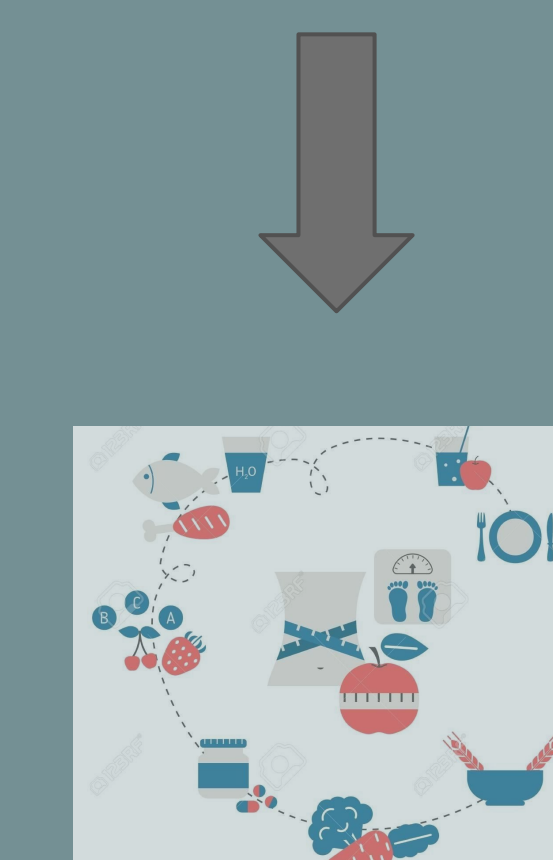
- **Screen for Childhood Anxiety Related Disorders** measures adolescents' anxiety symptoms in the past three months  
 Example: "I don't like to be with people I don't know well."

### Emotional Reactivity:

- Assesses how adolescents experience emotions on a regular basis.  
 Example: "When something happens that upsets me, it's all I can think about for a long time"

PANDA Dataset:  
N= 853

- Longitudinal Study across 7-time points, each measured 6-months apart



## Multilevel Modeling Results

### Fixed Effects: Anxiety as Moderator

	Estimate	Est. Error	L-95% CI	U-95%CI
Intercept	1.40	0.06	1.27	1.53
Time	0.06	0.01	0.03	0.09
Gender	0.12	0.11	-0.01	0.35
Within-person Instagram	<b>0.14</b>	<b>0.02</b>	<b>0.10</b>	<b>0.18</b>
Between-person Anxiety	<b>0.06</b>	<b>0.02</b>	<b>0.02</b>	<b>0.10</b>
Instagram: Anxiety	0.00	0.01	-0.01	0.02

### Random Effects

	Estimate	Est. Error	L-95% CI	U-95%CI
Sd(intercept)	1.39	0.04	1.30	1.47
Sd(Instagram)	0.28	0.02	0.23	0.32
Cor(intercept, Instagram)	0.38	0.07	0.24	0.53

### Fixed Effects: Emotional Reactivity as Moderator

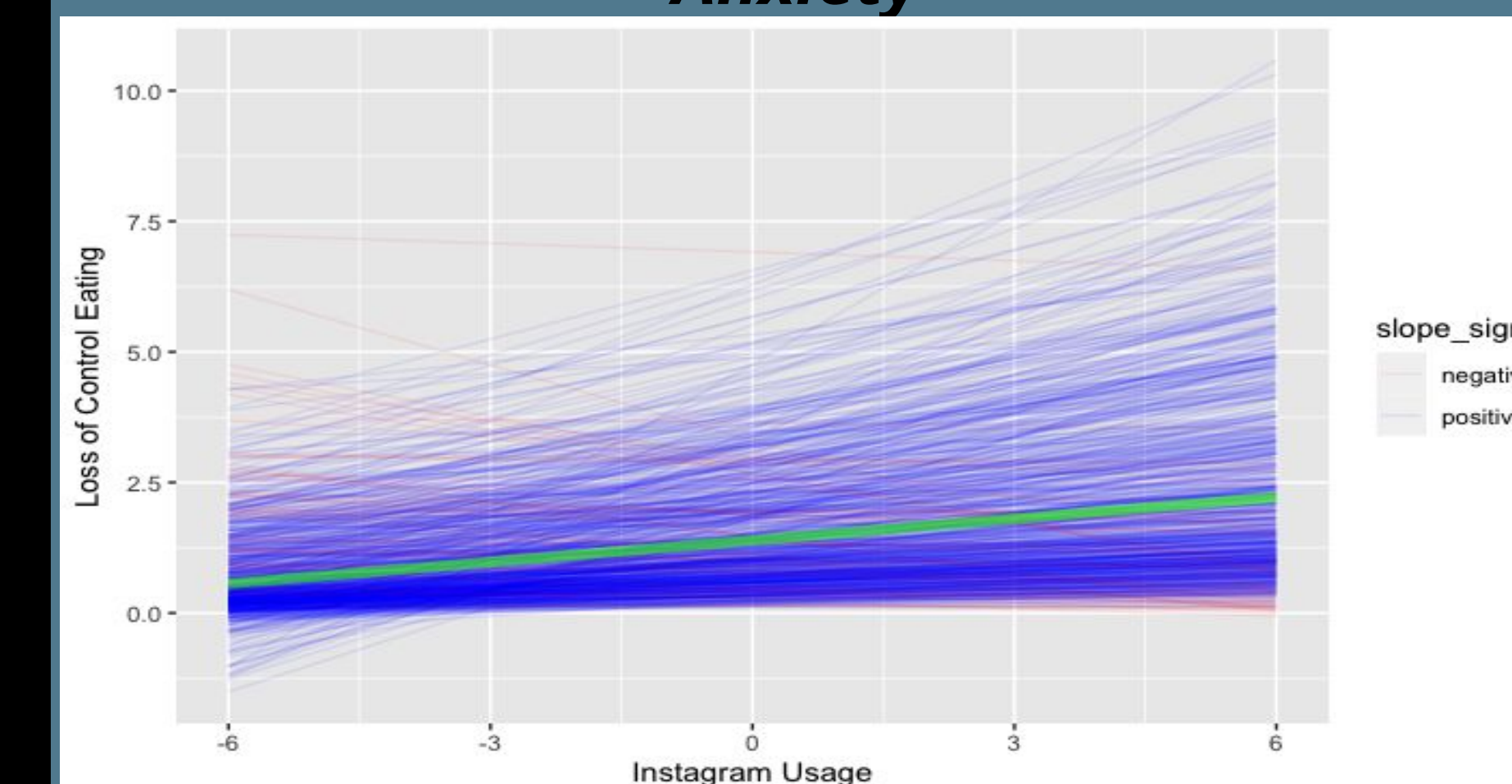
	Estimate	Est. Error	L-95% CI	U-95%CI
Intercept	1.40	0.06	1.29	1.53
Time	0.06	0.01	0.03	0.09
Gender	0.03	0.11	-0.19	0.24
Within-person Instagram	<b>0.14</b>	<b>0.02</b>	<b>0.10</b>	<b>0.18</b>
Between-person Emotional Reactivity	<b>0.08</b>	<b>0.01</b>	<b>0.05</b>	<b>0.10</b>
Instagram: Emotional Reactivity	0.00	0.00	-0.01	0.01

### Random Effects

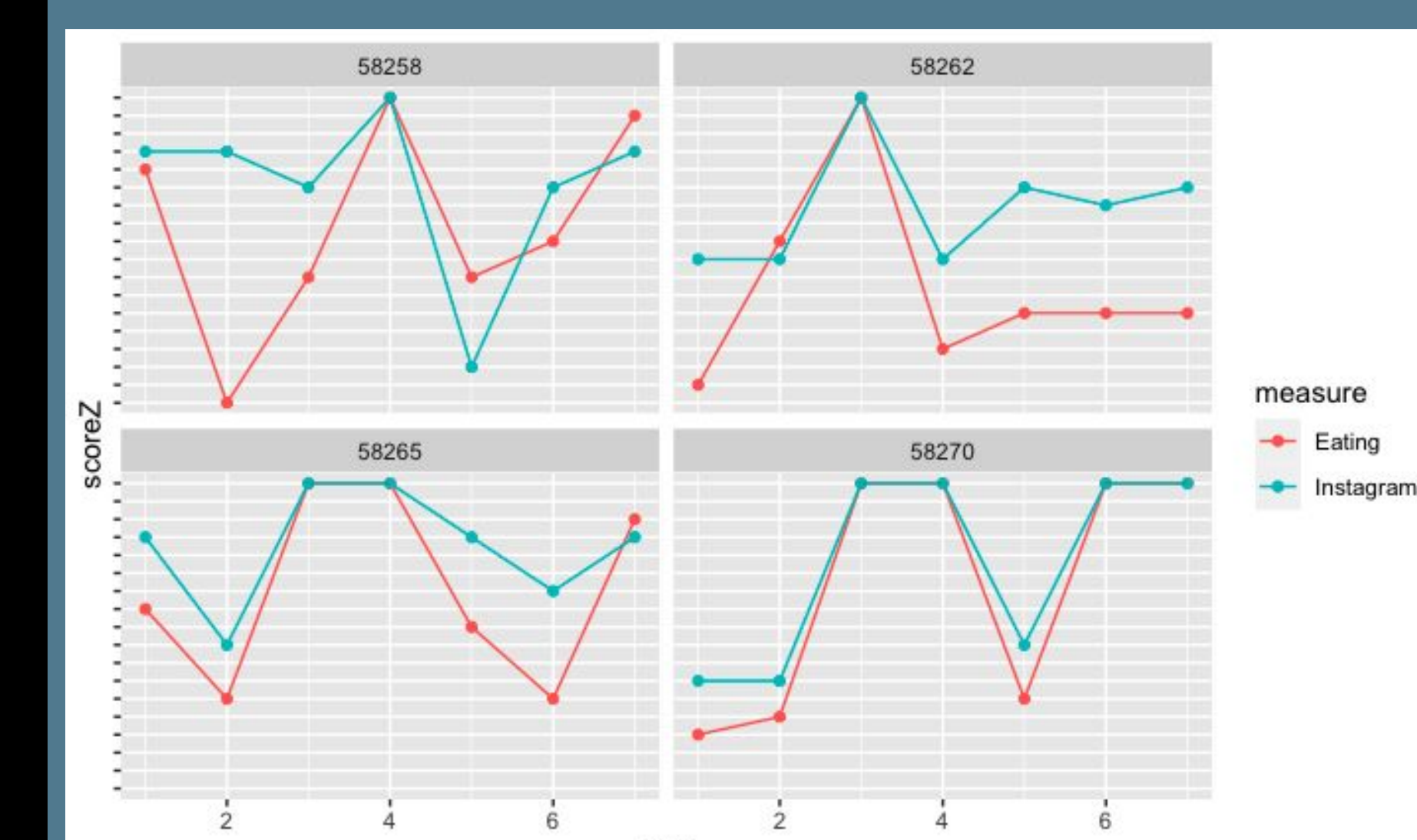
	Estimate	Est. Error	L-95% CI	U-95%CI
Sd(intercept)	1.35	0.04	1.27	1.44
Sd(Instagram)	0.28	0.02	0.23	0.32
Cor(intercept, Instagram)	0.39	0.07	0.24	0.24

## Results

### Spaghetti Plots of within-subject with Anxiety



### Panel Plots of Instagram Usage and LOCE Co-Varying Over the 7-time points



## Conclusion

- Teen's Increased Instagram usage was found to significantly increase loss of control eating behavior.
- There was no significant moderation of anxiety or emotional reactivity
  - Significant main effects of anxiety and emotional reactivity on LOCEs
    - Teen's with more anxiety and emotional reactivity had higher LOCEs