



# Internalizing Psychopathology Correlates with Emotion Regulation, but not IQ in Subclinical Undergraduates

Isabella Ramirez<sup>1\*</sup>, Gabriella Pineiro<sup>1\*</sup>, Brian Kraus<sup>2</sup>, MA, Caterina Gratton<sup>1,2</sup>, PhD  
<sup>1</sup>Florida State University, <sup>2</sup>Northwestern University, \*Co-First Authors

## Introduction

- Past research has shown that emotion regulation competency and IQ are related to mental health (Gross & Munoz, 1995)
- Two commonly studied strategies of emotion regulation are cognitive reappraisal and expressive suppression (Gross & John, 2003)
- In Western samples, reappraisal is associated with better mental health outcomes while the opposite has been found for suppression
- One common method of categorizing psychopathology is by separating it into "internalizing" and "externalizing" dimensions (Kotov et al., 2017)
  - Internalizing disorders involve negative affect, anxiety, and depression symptoms (Krueger et al., 1998)
- This study aims to confirm **the presence of an internalizing dimension** in subclinical undergraduates, and explore its **associations with IQ** and choice of **emotion regulation strategies**

## Methods

### Participants

- 79 participants aged 18-35 years old from the "iNetworks" data set

### Self-Report Psychopathology Surveys

- ASRS (Adult ADHD Self-Report Survey)
- PSQW (Penn State Worry Questionnaire)
- Behavioral Activation/Behavioral Inhibition Scale
- DAST (Drug Abuse Screening Test)
- ERQ (Emotion Regulation Questionnaire)
- CAPE (Community Assessment of Psychic Experience)
- 7 Up 7 Down Inventory
- STAI (State Trait Anxiety Inventory)
- MASQ (Mood and Anxiety Symptom Questionnaire)
- SAPA (Synthetic Aperture Personality Assessment)
- ICAR (International Cognitive Ability Resource)

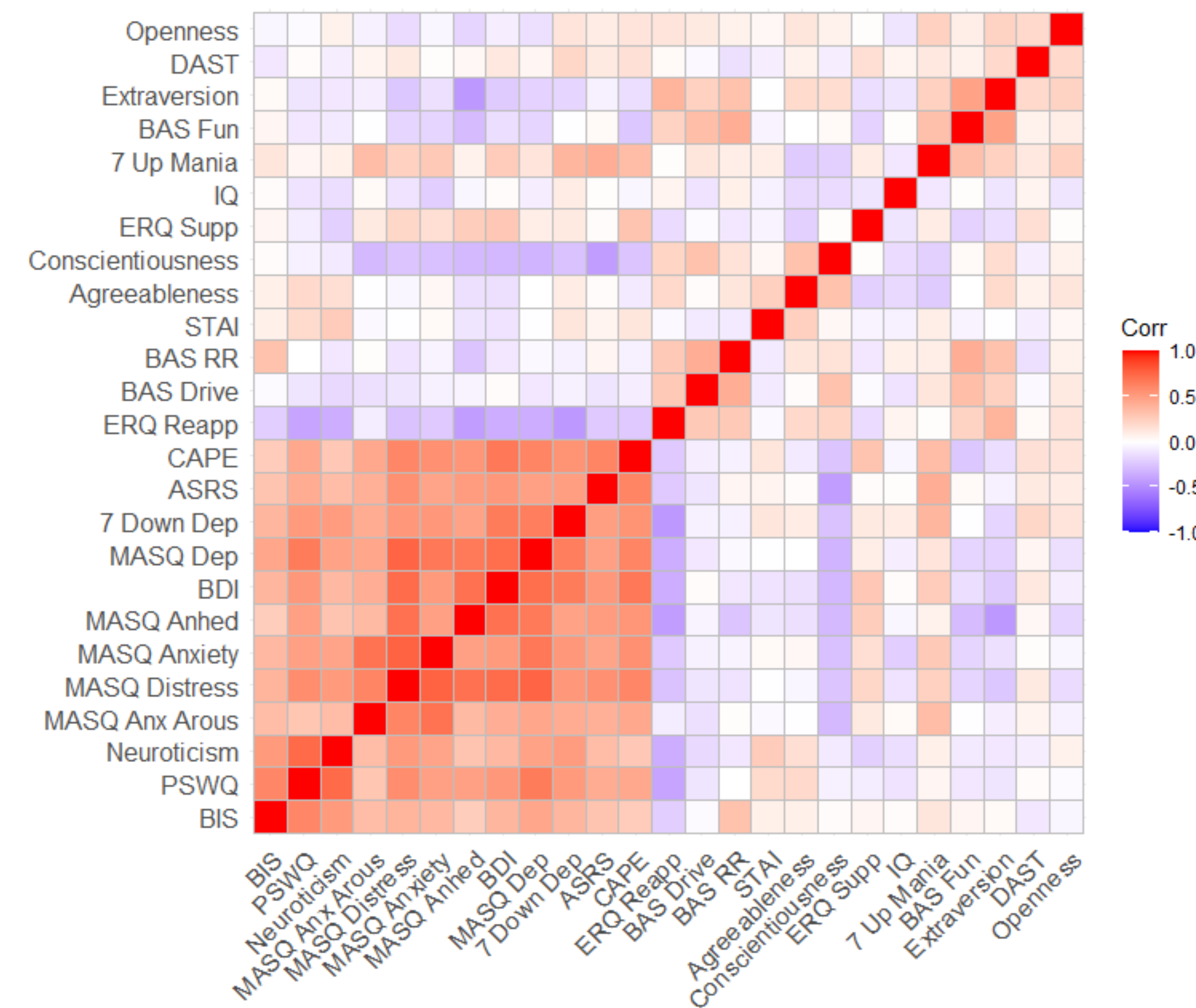
### Statistical Analysis

- All statistical tests and figures were created using R

## Discussion

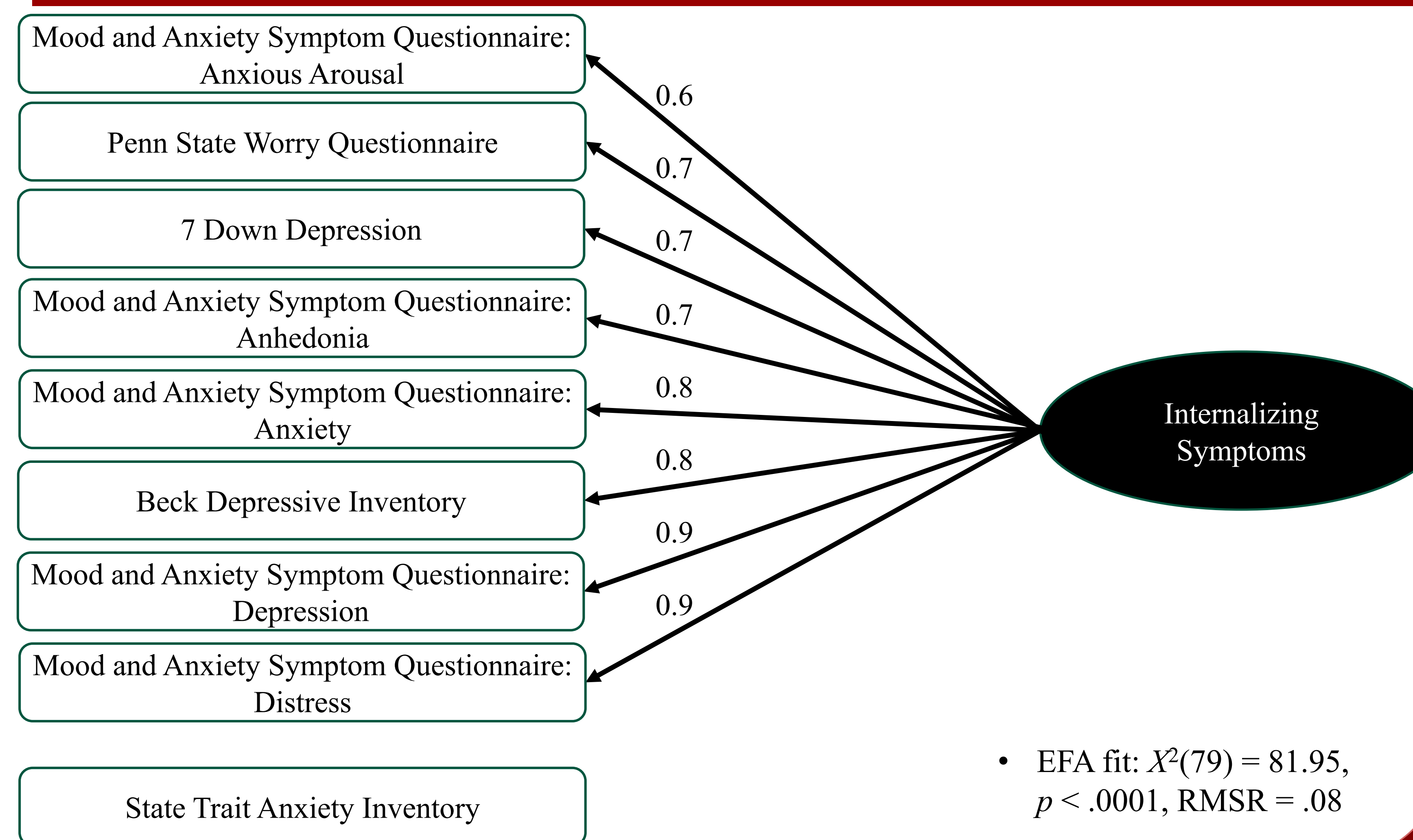
- While a significant negative correlation was found between internalizing symptom severity and cognitive reappraisal, a non-significant positive correlation was observed between expressive suppression and internalizing symptoms
- Consistent with past studies in Western samples, cognitive reappraisal was linked to lower internalizing symptoms (i.e., better mental health outcomes), while expressive suppression associated with higher internalizing symptoms
- Undergraduates' mental health may benefit from psychoeducation of cognitive reappraisal skills
- Did not replicate previous findings of a consistent relationship between psychopathology and IQ
- The relationship between psychopathology and IQ may not be as strong in undergraduates that are not currently diagnosed with a psychiatric disorder

## 1. Internalizing symptoms are correlated in subclinical undergraduates



- Clearly observable cluster of psychopathology measures corresponding to a dimensional internalizing factor in the bottom left corner of the correlation matrix

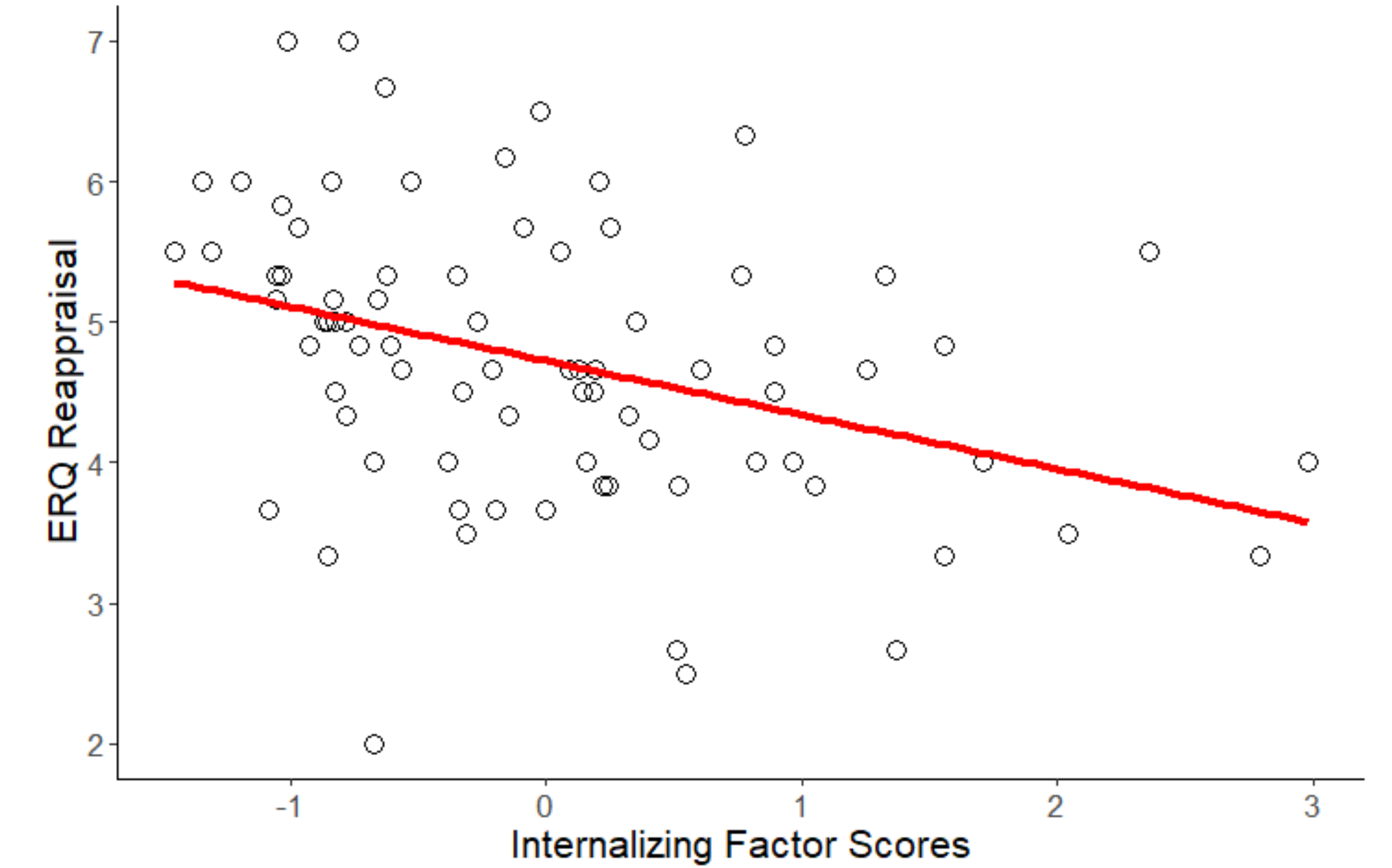
## 2. Internalizing symptoms cluster into a single factor



## References

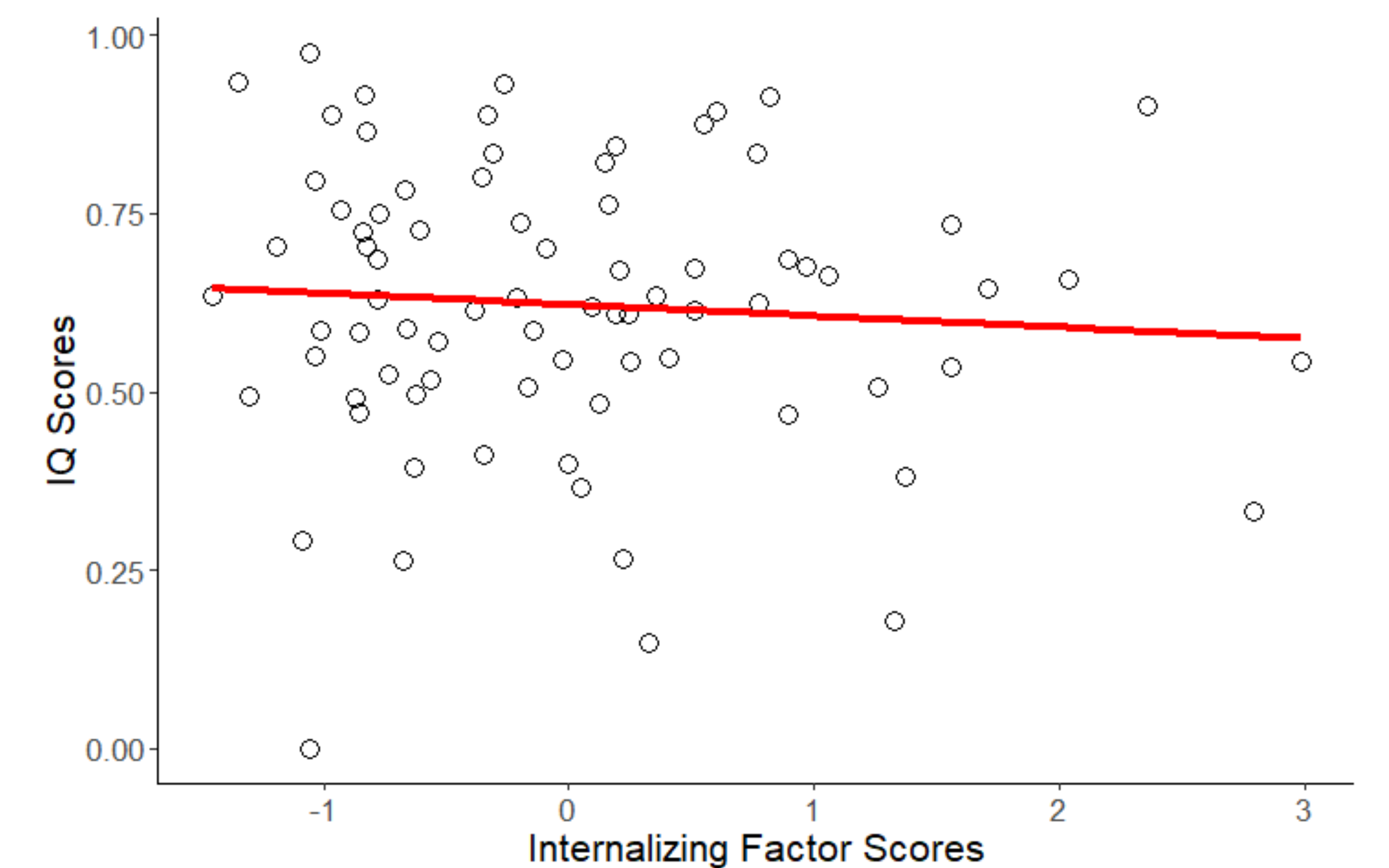
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85(2), 348–362. <https://doi.org/10.1037/0022-3514.85.2.348>
- Gross, J. J., & Muñoz, R. F. (1995). Emotion regulation and mental health. *Clinical Psychology: Science and Practice*, 2(2), 151–164. <https://doi.org/10.1111/j.1468-2850.1995.tb00036.x>
- Kotov, R., Krueger, R., Watson, D., Achenbach, T., Althoff, R., Bagby, M., Brown, T., Docherty, A., Miller, J., Simms, L., South, S. C., & Tackett, J. L. (2017). *The Hierarchical Taxonomy of Psychopathology (HiTOP): A Dimensional Alternative to Traditional Nosologies*. <https://doi.org/10.31234/osf.io/zandf>
- Krueger, R. F., Caspi, A., Moffitt, T. E., & Silva, P. A. (1998). The structure and stability of common mental disorders (DSM-III-R): A longitudinal-epidemiological study. *Journal of Abnormal Psychology*, 107(2), 216–227. <https://doi.org/10.1037/0021-843x.107.2.216>

## 3. Cognitive reappraisal is associated with less self-reported internalizing psychopathology in undergraduates



- Significant negative correlation found between internalizing symptom severity and cognitive reappraisal  $r(77) = -0.345$ ,  $p < 0.001$ . Conversely, a non-significant positive correlation was observed between internalizing symptoms and expressive suppression,  $r(77) = 0.19$ ,  $p = 0.094$

## 4. Psychopathology scores are not significantly associated with IQ scores in subclinical undergraduates



- No significant relationship found between IQ and internalizing symptoms ( $r(77) = -0.1055$ ,  $p = 0.355$ ), contrasting with previous findings that report a significant negative correlation between IQ and internalizing symptoms