

Exploring and Connecting the Within-person Factor Structures of Psychosis-related EMA and Clinician-Rated Symptoms

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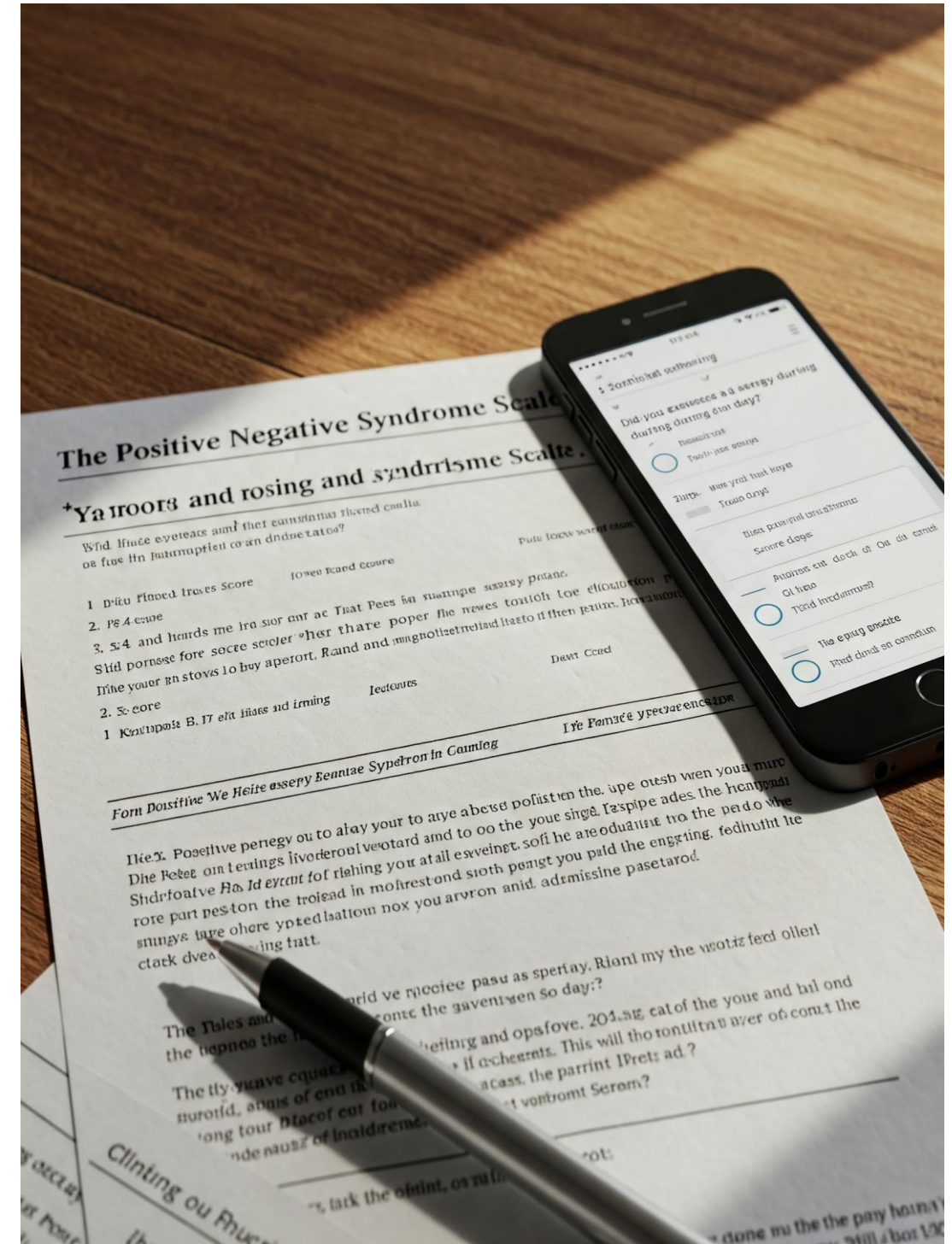
University of Kansas

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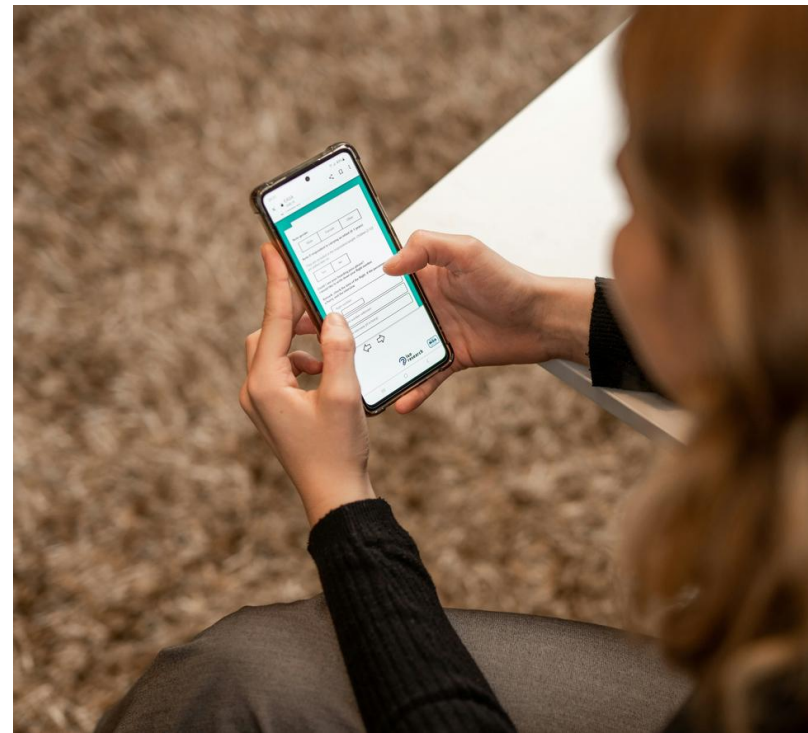


INTRODUCTION

- **Transdiagnostic** approach to understanding affective and non-affective **psychotic disorders** has emerged
- However, **within-person** factor structure remains under-investigated
- **Daily symptom fluctuations** are important to track in outpatients with psychosis
- Research on **mapping** daily symptom fluctuations onto clinical transdiagnostic symptoms is needed



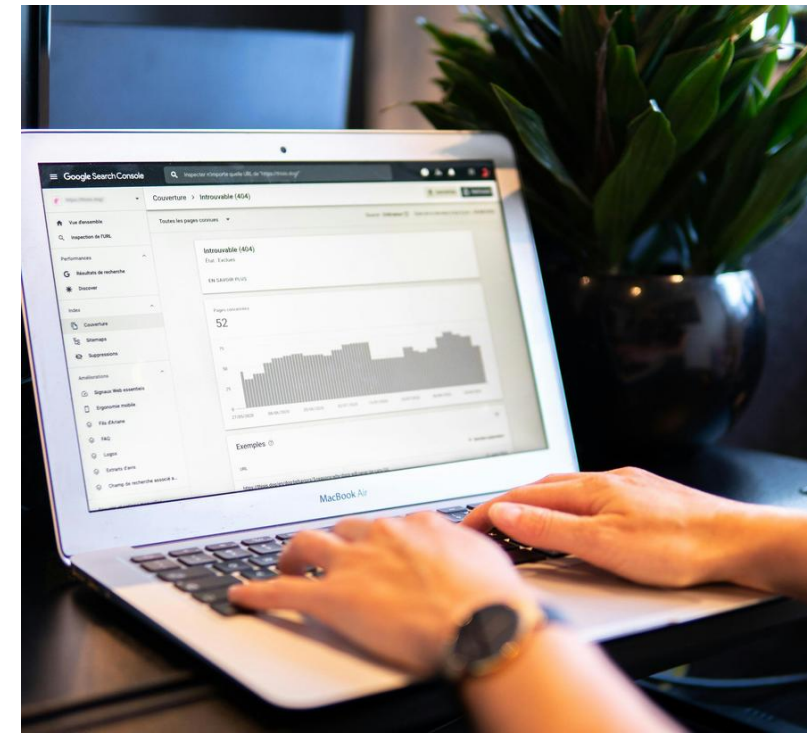
M E T H O D S



Participants



Measures

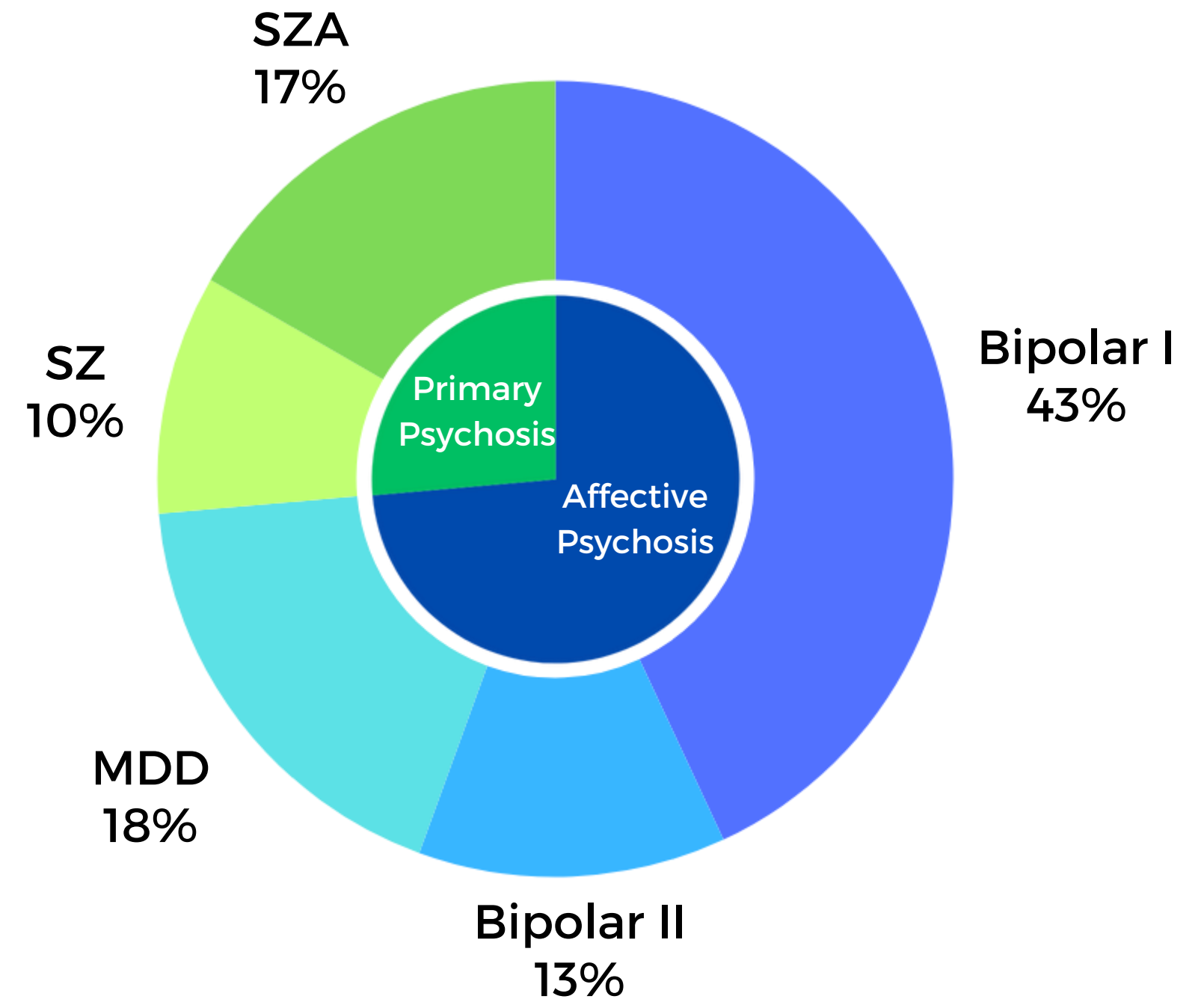


Analyses

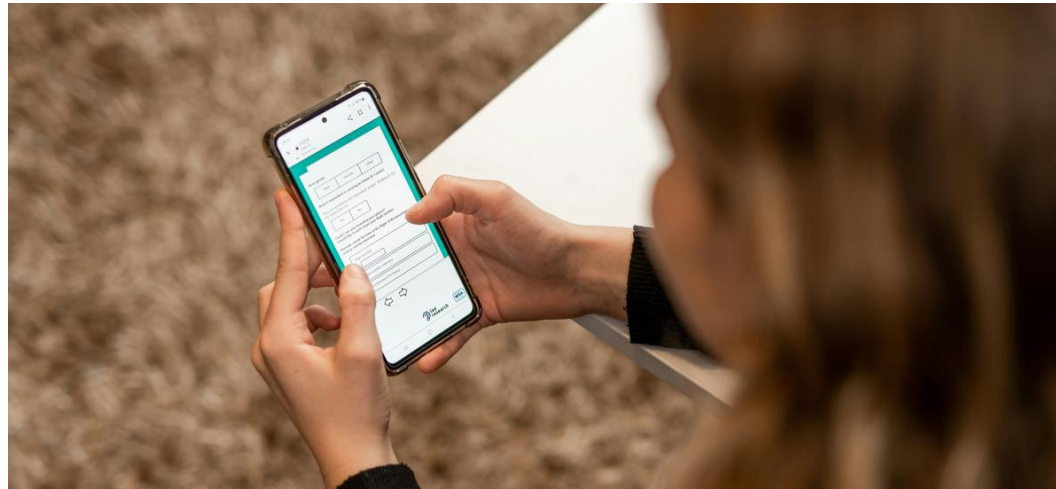
PARTICIPANTS



Outpatients
with primary or
affective psychosis
($N = 70$)



MEASURES



Daily Surveys

- Affect (16 items)
- Social (3 items)
- Physical (10 items)
- Stress (2 items)
- Psychosis (3 items)

Total Surveys = 31,869
Per Person IQR = 146 - 557

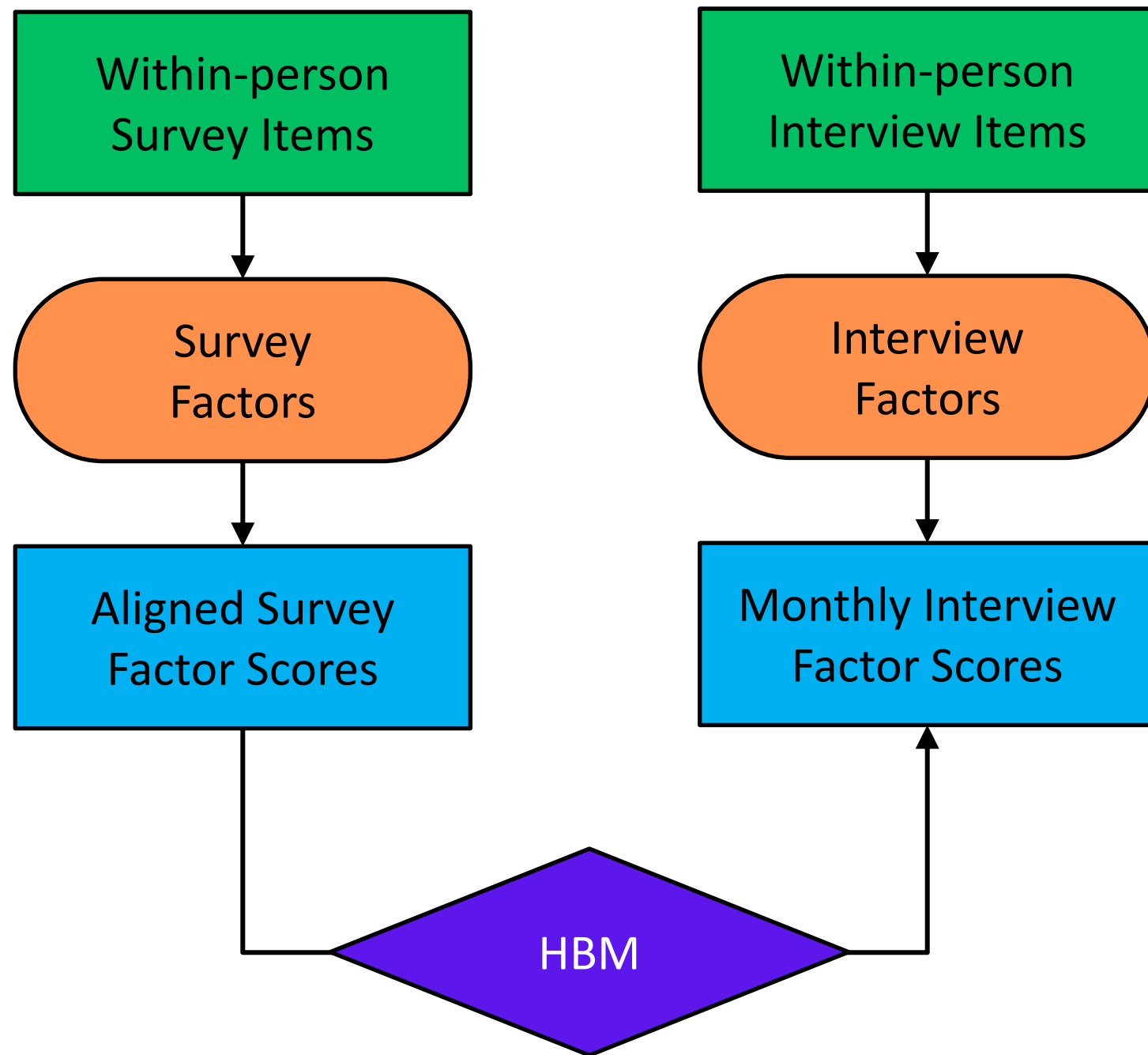


Monthly Interviews

- PANSS Positive (7 items)
- PANSS Negative (8 items)
- PANSS General (16 items)
- MADRS Depress. (10 items)
- YMRS Mania (11 items)

Total Interviews = 911
Per Person IQR = 8 - 20

ANALYSES



1



Decompose variance in items into between-person means and within-person deviations

2



Run factor analyses for daily surveys and monthly interviews at the within-person level

3



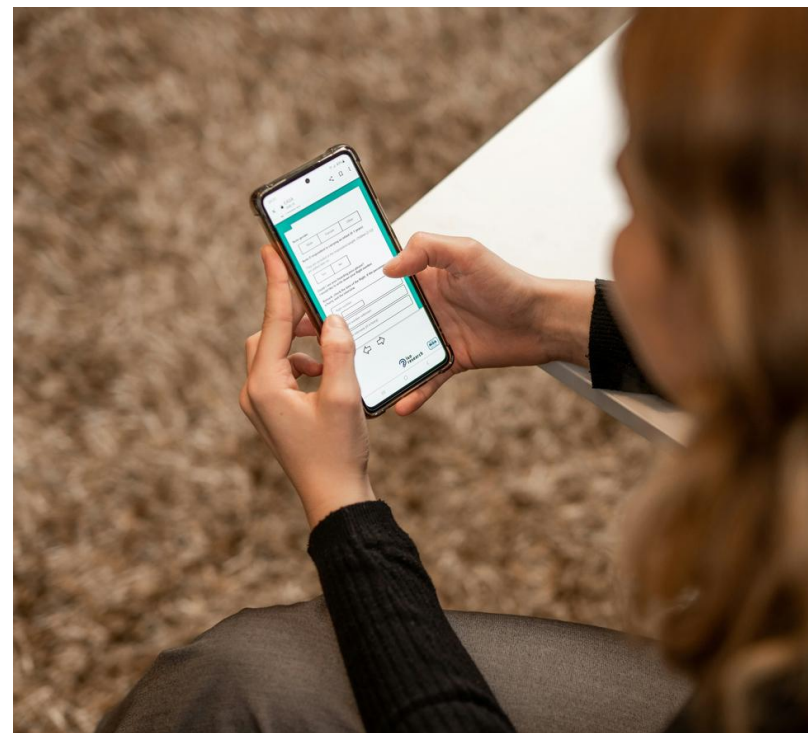
Align factor score estimates by calculating survey averages within the 3, 7, and 14 days preceding each interview

4



Run Hierarchical Bayesian Models to regress interview factor scores on the aligned survey factor scores

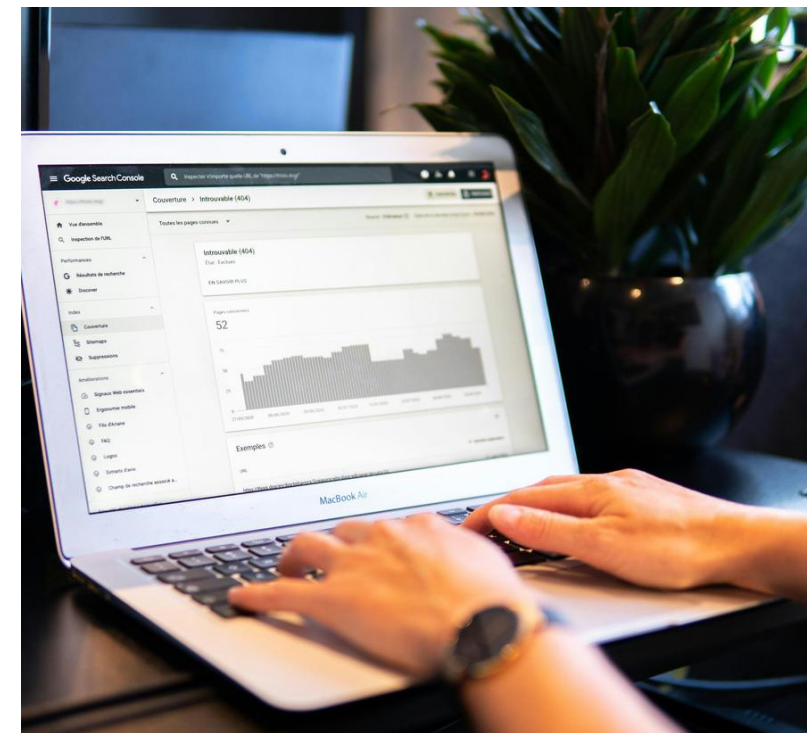
R E S U L T S



Survey Factors

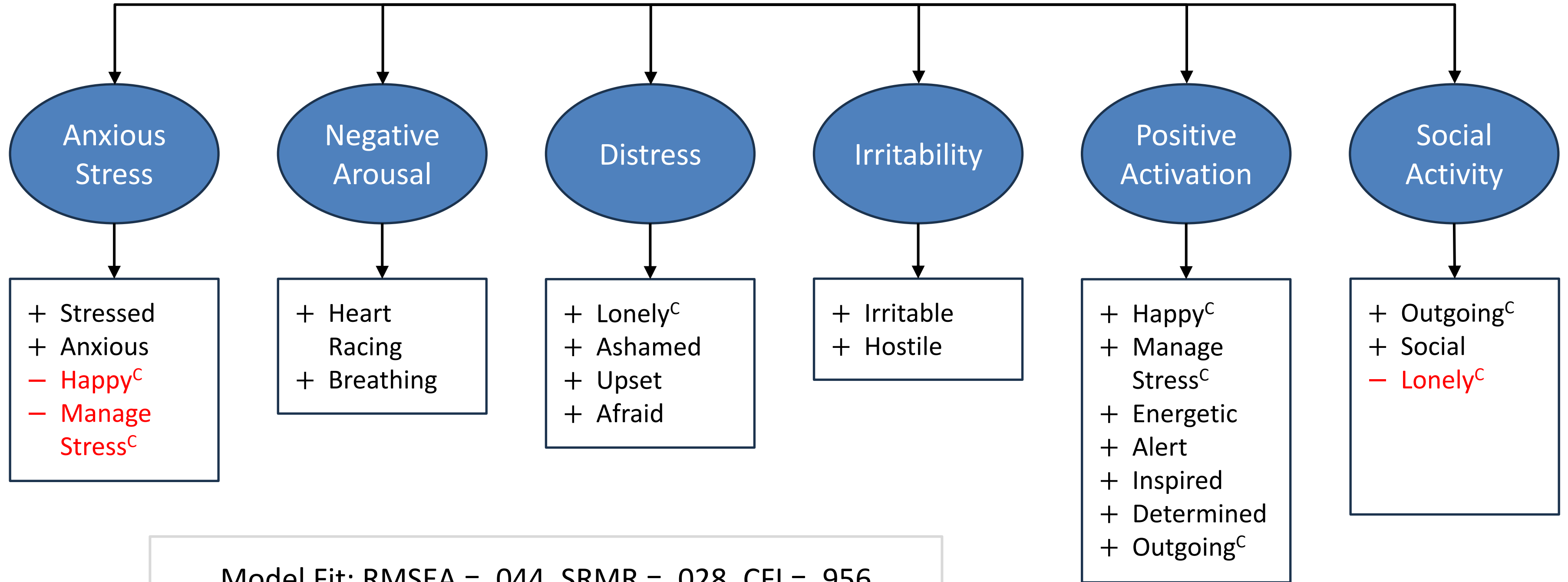


Interview Factors



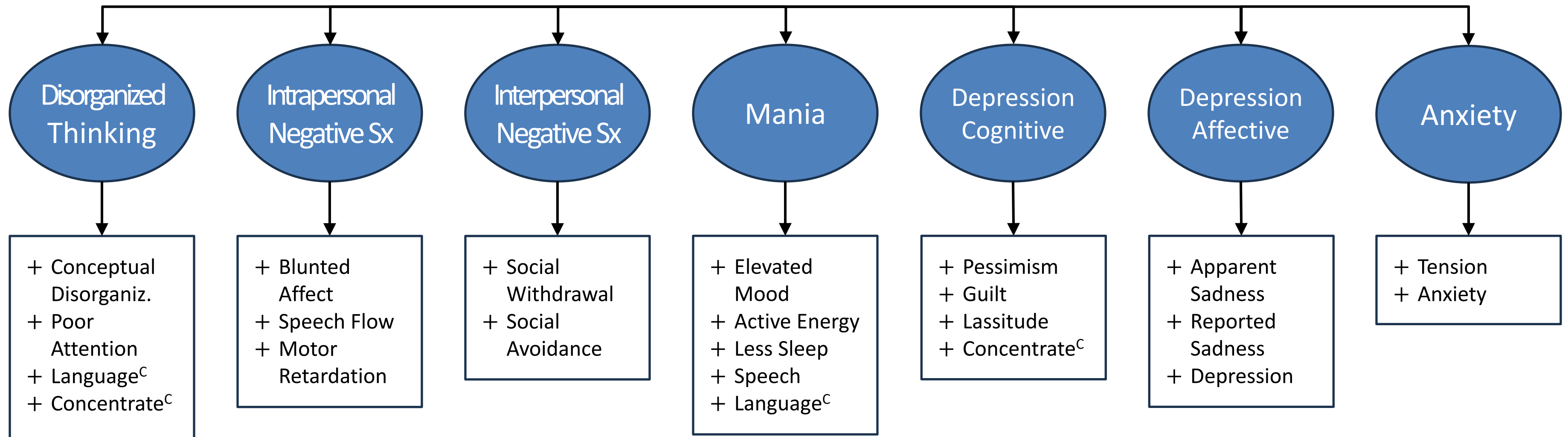
Bayesian Regression

Survey Factor Structure



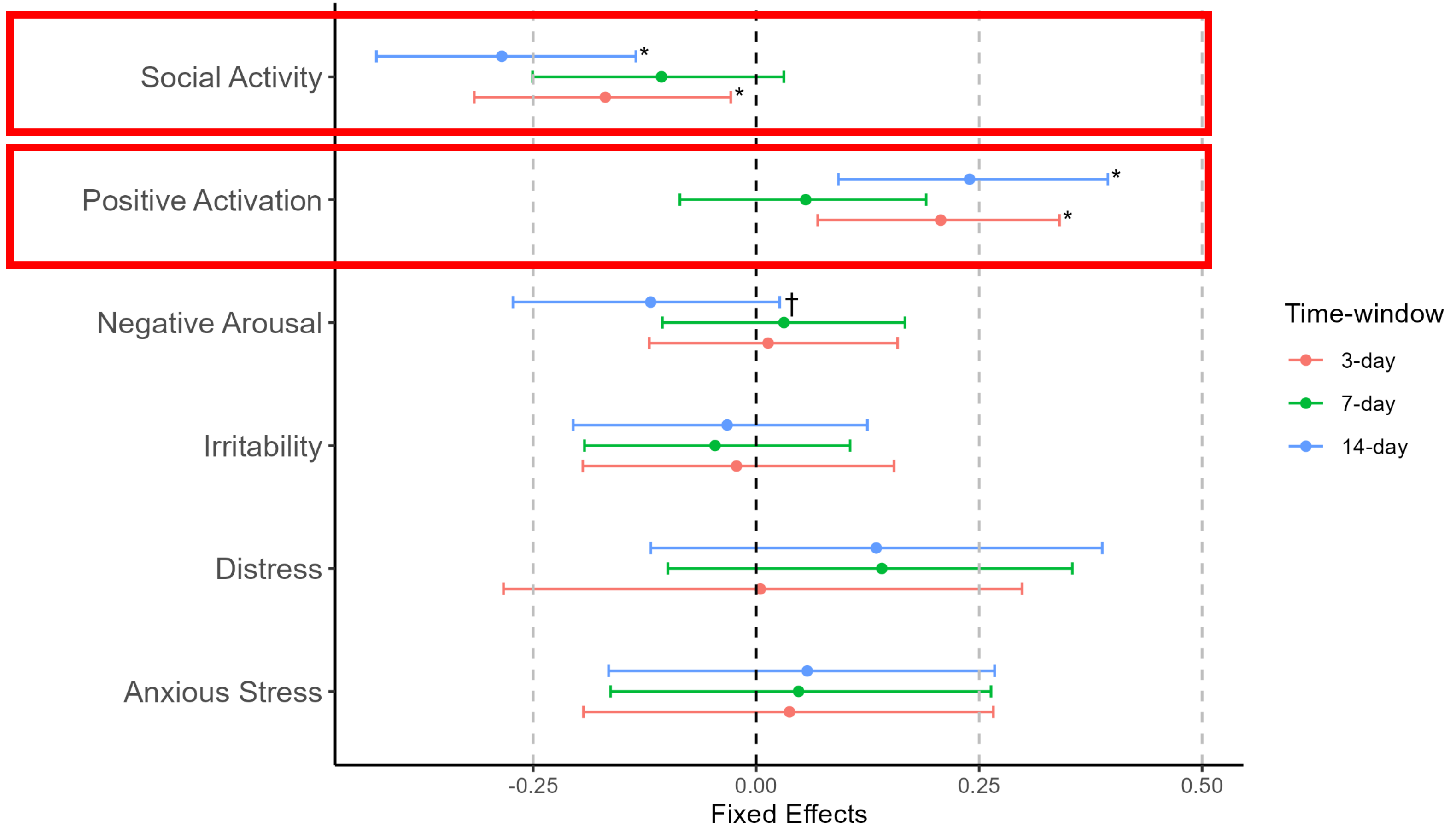
Model Fit: RMSEA = .044, SRMR = .028, CFI = .956

Interview Factor Structure

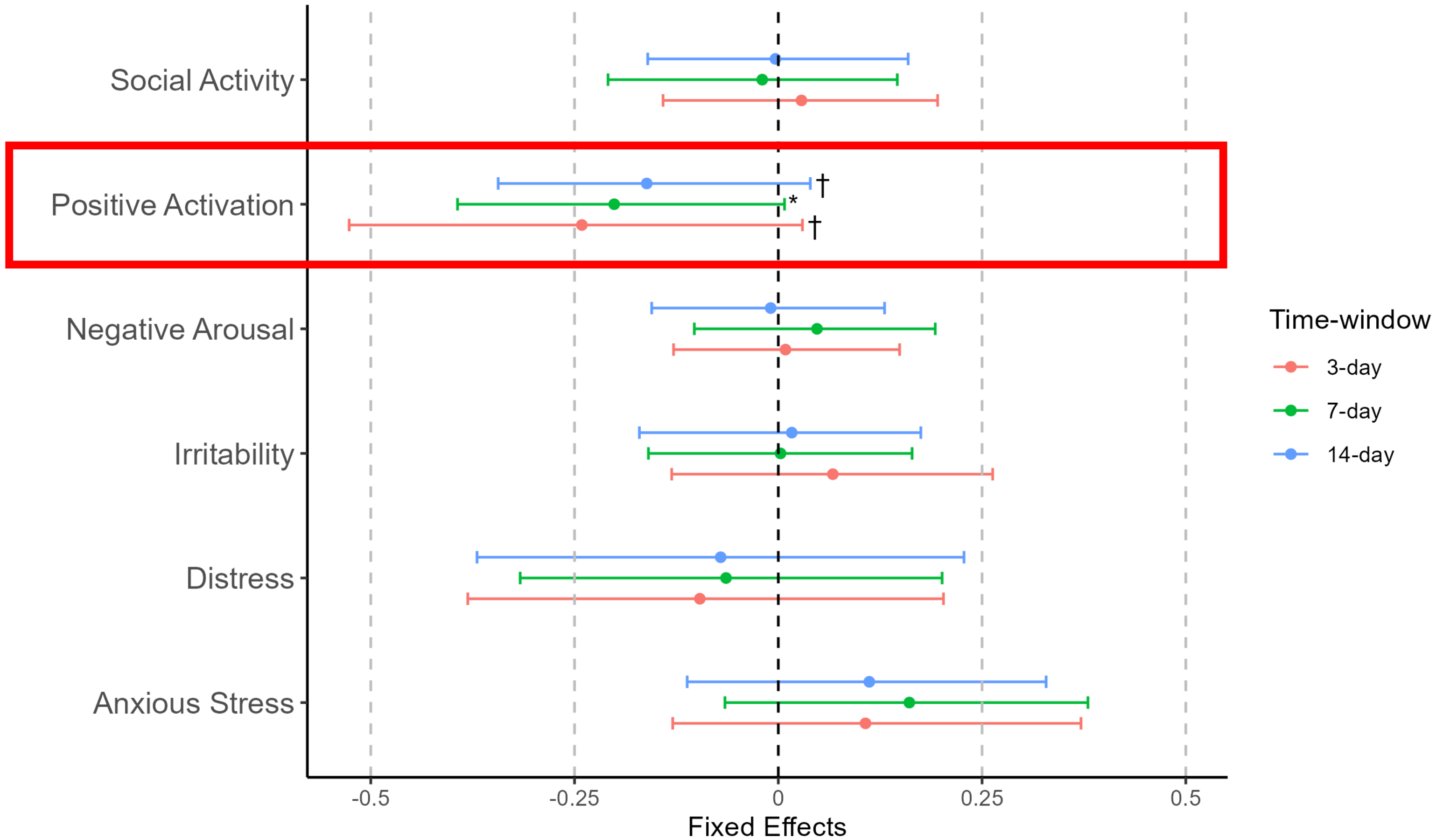


Model Fit: RMSEA = .043, SRMR = .044, CFI = .949

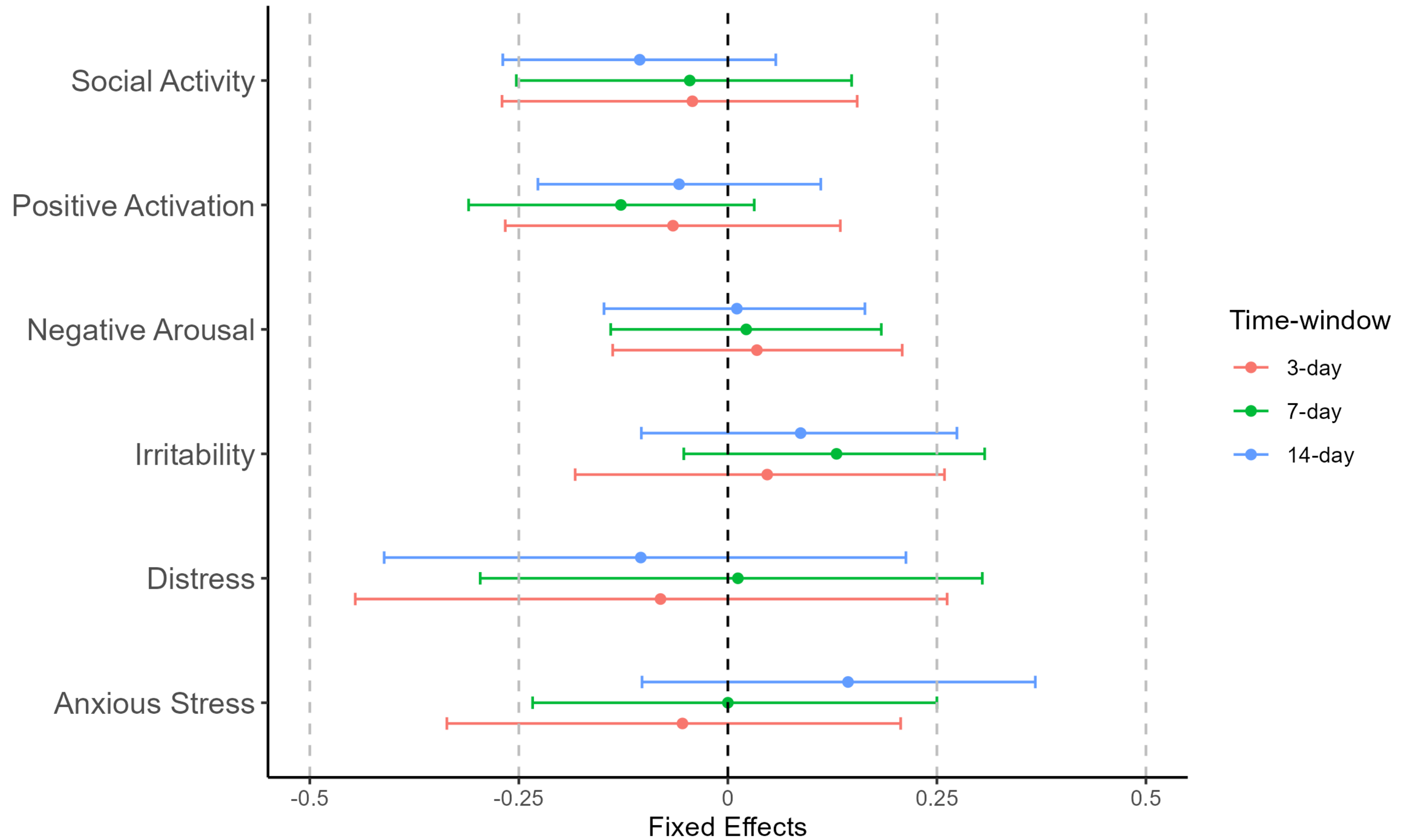
Bayesian MLM Predicting Clinical Disorganized Thinking Factor



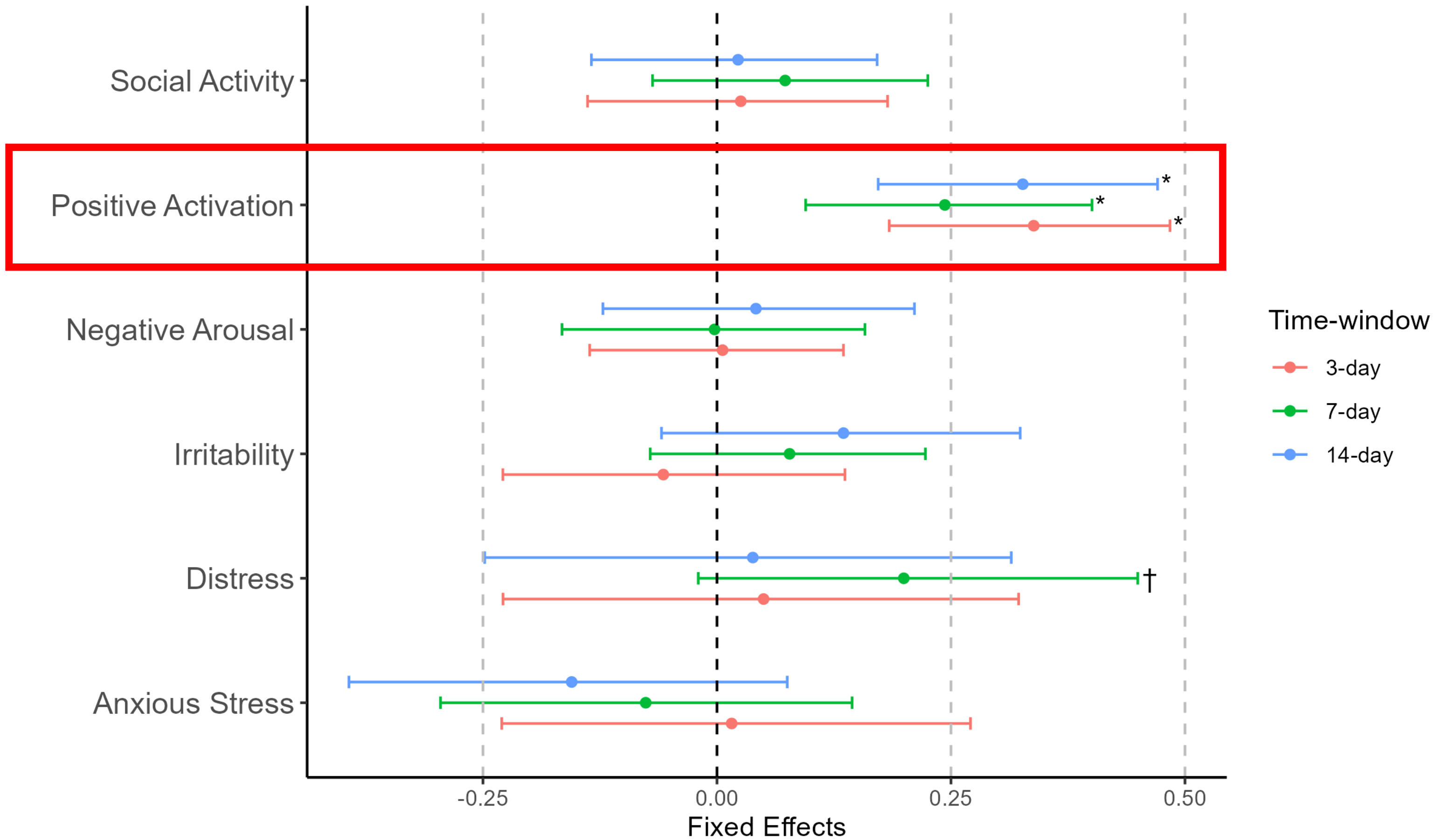
Bayesian MLM Predicting Clinical Intrapersonal Negative Symptom Factor



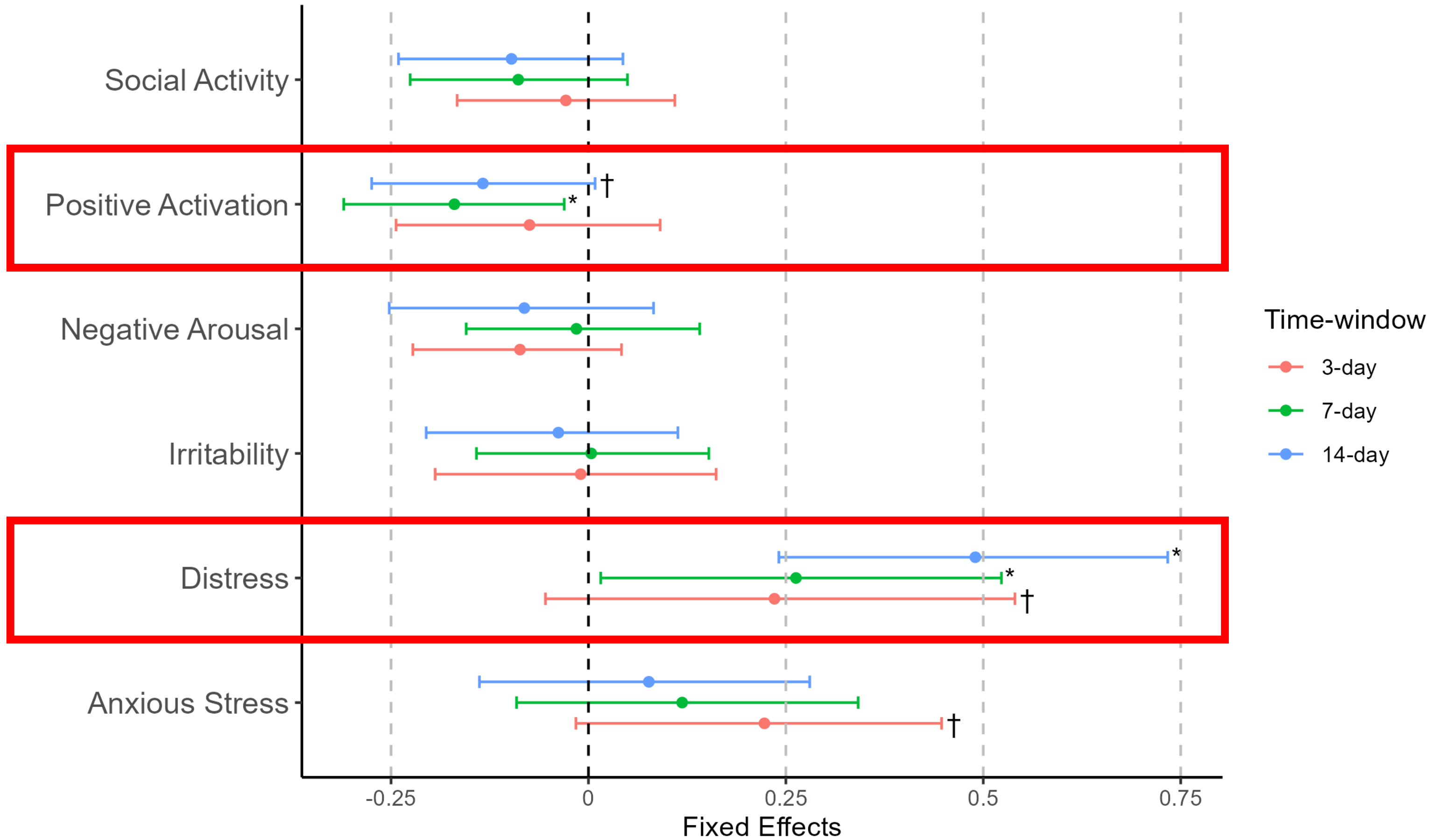
Bayesian MLM Predicting Clinical Interpersonal Negative Symptom Factor



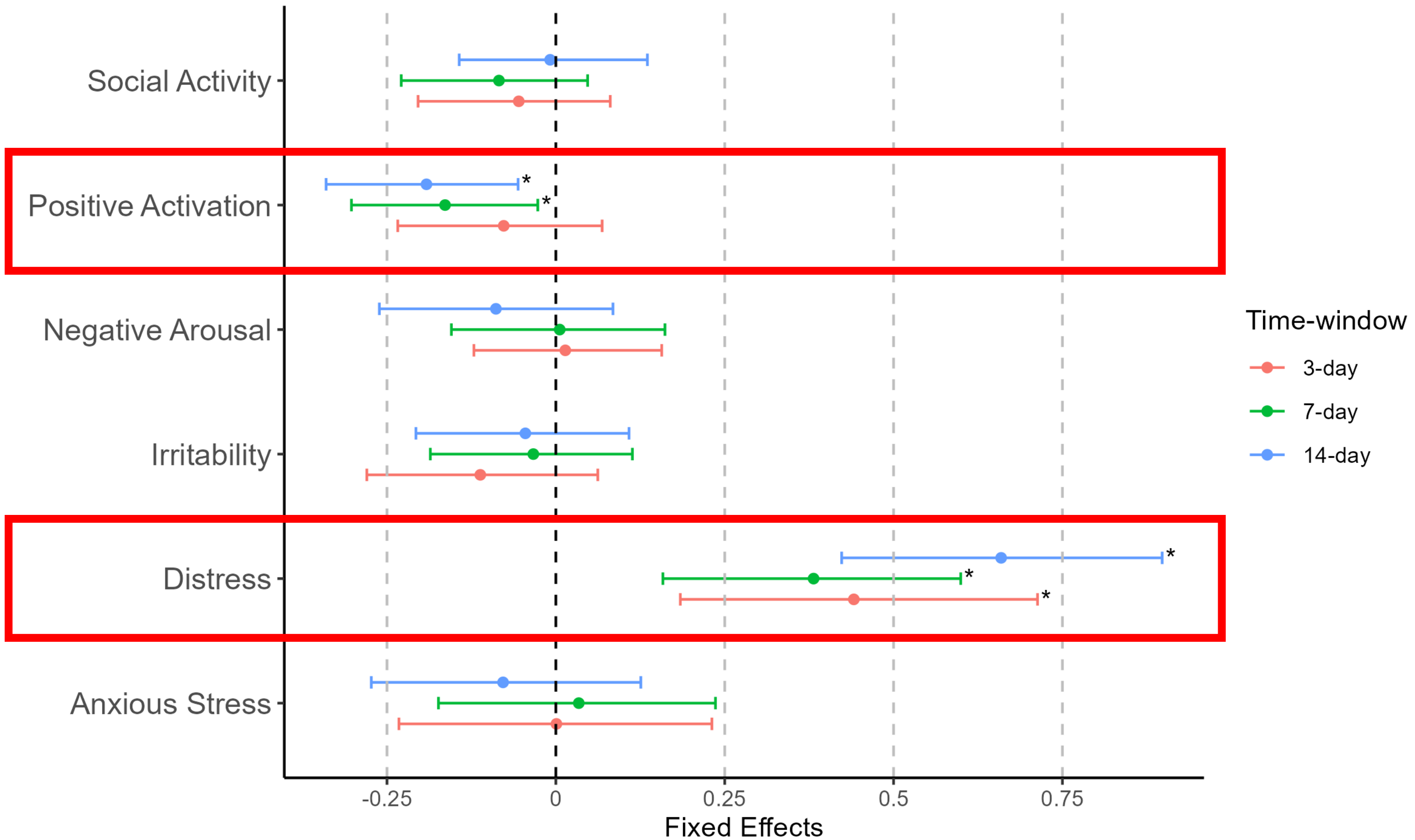
Bayesian MLM Predicting Clinical Mania Factor



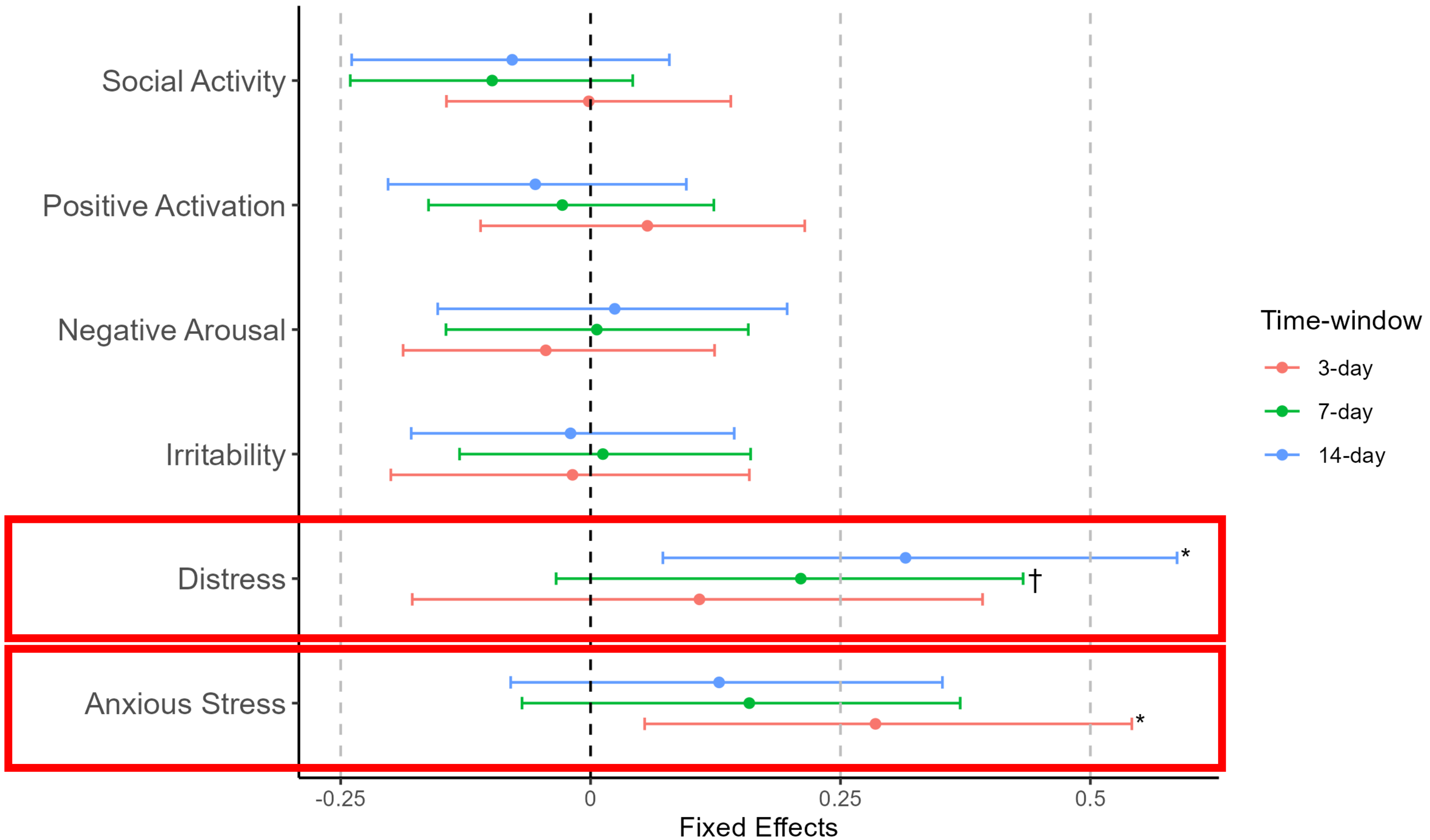
Bayesian MLM Predicting Clinical Cognitive Depression Factor



Bayesian MLM Predicting Clinical Affective Depression Factor

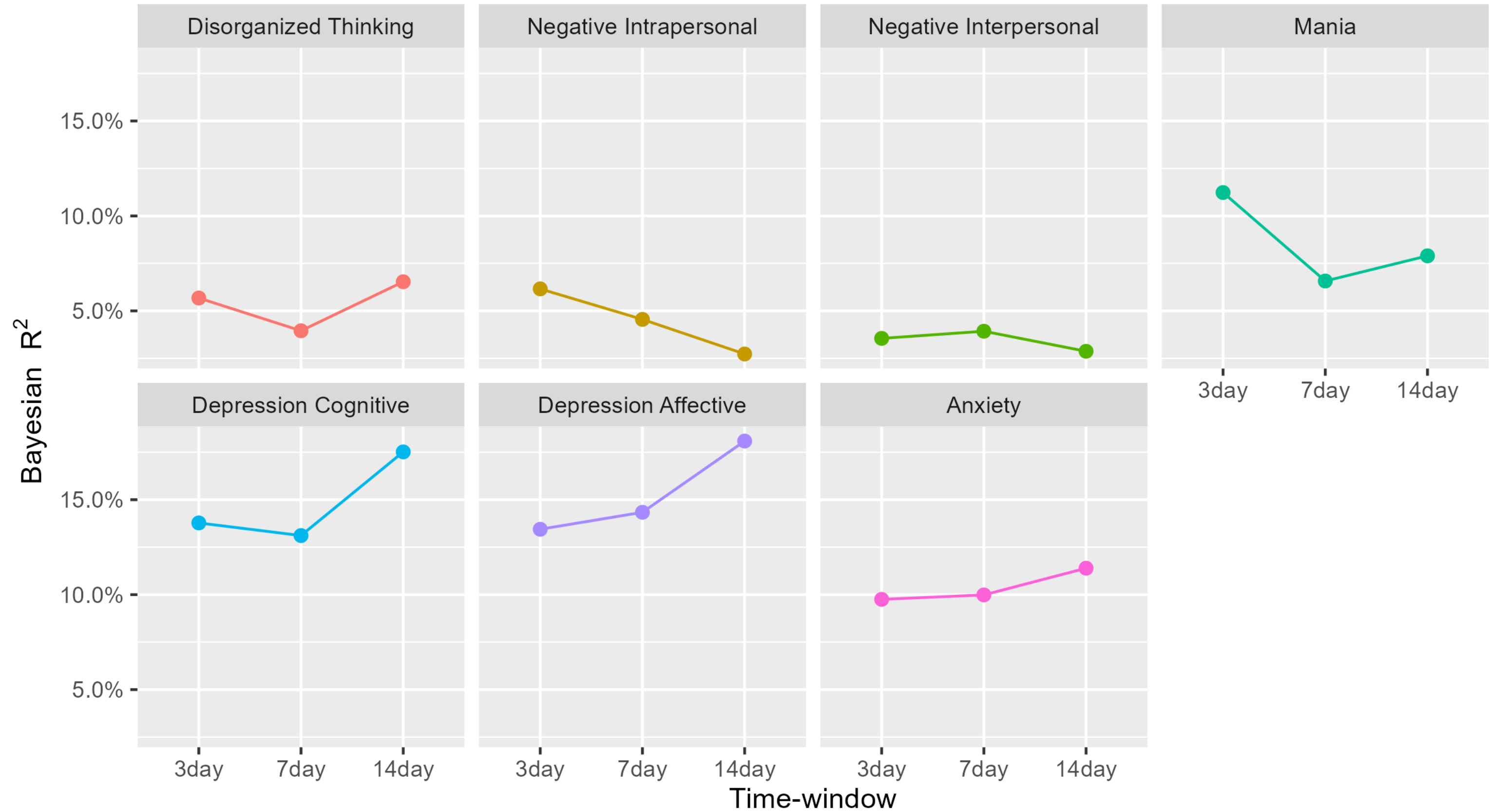


Bayesian MLM Predicting Clinical Anxiety Factor



Trend of Bayesian Marginal R^2 across Different Time-window

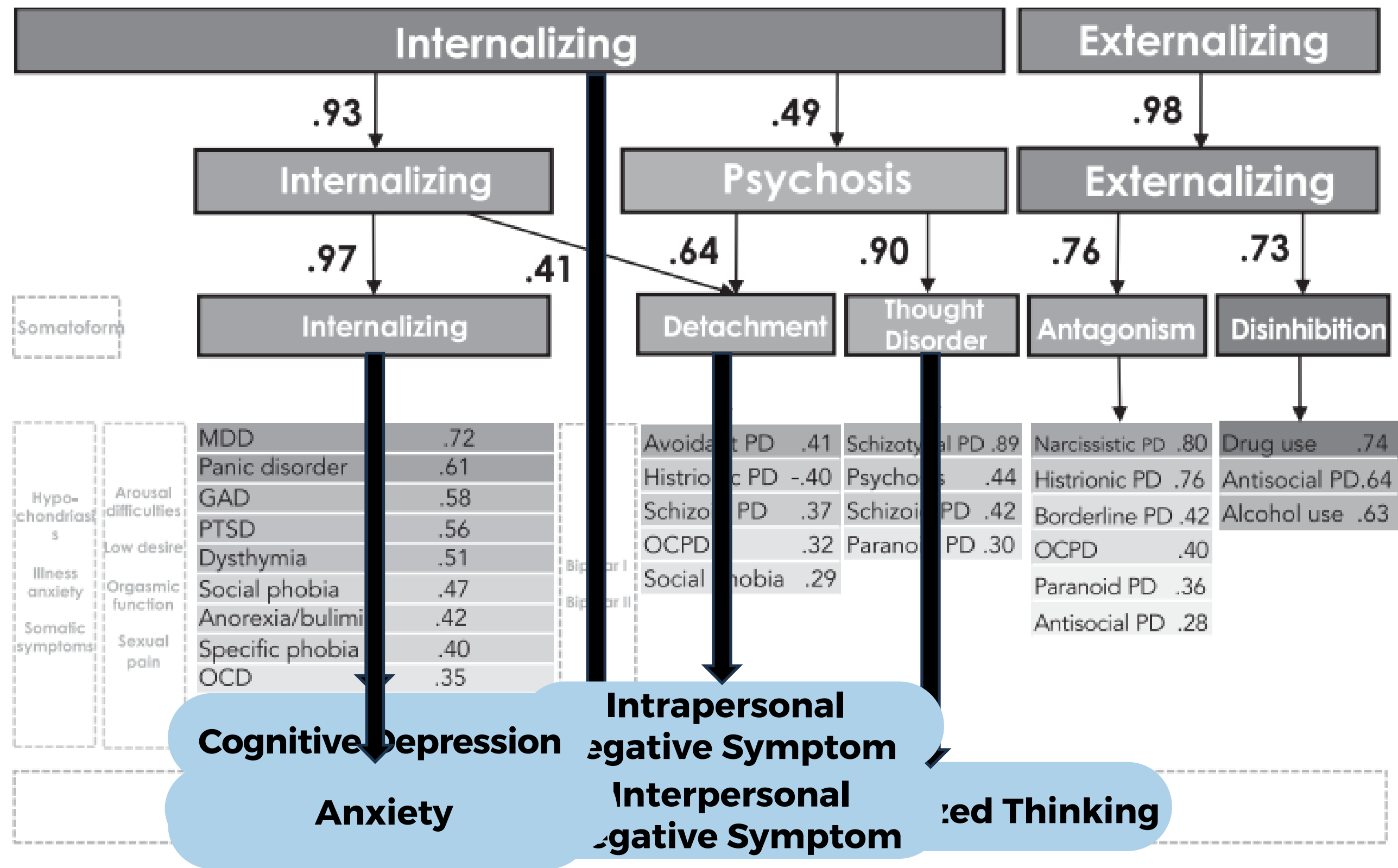
EMA factor scores predicting Clinical factor scores



Within-person Interview Factors

- Mania
- Disorganized Thinking
- Intrapersonal Negative Symptom
- Interpersonal Negative Symptom
- Cognitive Depression
- Affective Depression
- Anxiety

Meta-analytic HiTOP model Ringwald, W. R., Forbes, M. K., & Wright, A. G. C. (2023)



Conclusions

- Daily survey factors predicted transdiagnostic symptom changes
- The predictive performance varies across different symptoms depending on time-windows
- Daily positive activation has differential relationships with transdiagnostic symptom factors





THANK YOU!

QUESTIONS?

Special Thanks to:

- The Functional Neuroimaging & Bioinformatics Lab at McLean Hospital (Dr. Baker's Lab)
- Jeffrey Girard (University of Kansas)



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