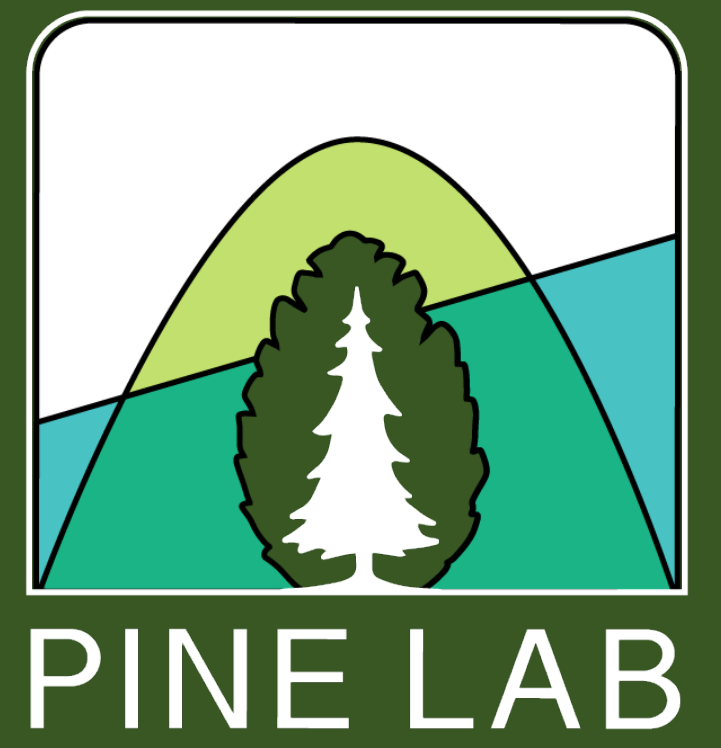




# Early Life Adversity Reveals Adaptive Use of Absorption in Music

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## Introduction

- Music listening is often identified as a pleasurable experience that individuals use to regulate emotions and behavior in every day life<sup>1</sup>
- Early life adversity (ELA) encompasses experiences across dimensions of threat, deprivation, and unpredictability and is associated with higher levels of mental health difficulties over the lifespan<sup>2</sup>
- Exposure to ELA may change how adults engage with and use music to regulate themselves

### Research Questions:

- A) How does early life adversity, with respect to developmental timing and dimension of adversity, impact adult music engagement?
- B) How do differences in music engagement relate to mental health and resilience in adulthood?

## Methods

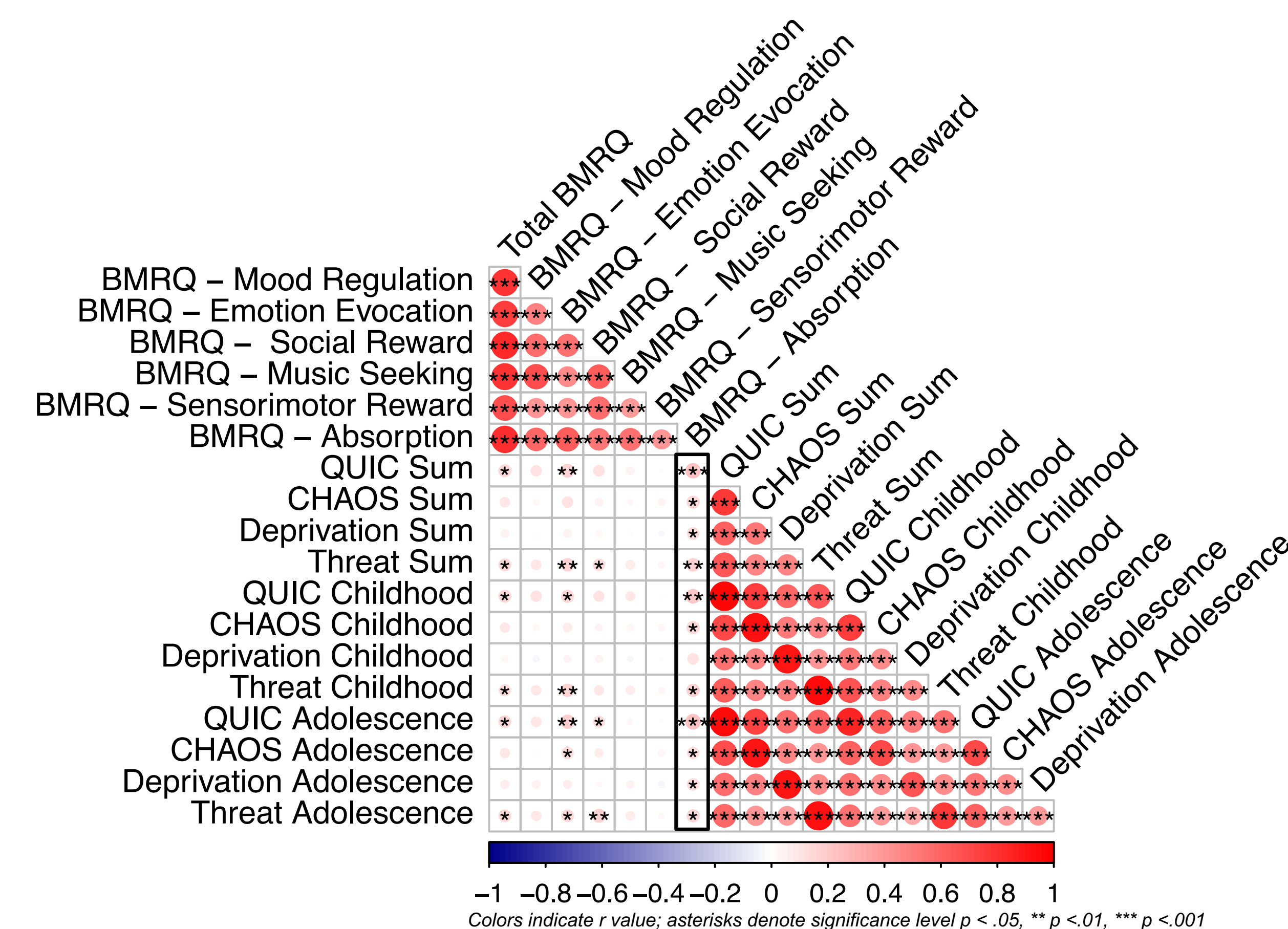
### STUDY 1:

- 254 participants (140F) recruited from a previous experiment
- Participants completed the Questionnaire of Unpredictability in Childhood<sup>3</sup> (QUIC), the short-form Confusion, Hubbub, and Order Scale<sup>4</sup> (CHAOS), McLaughlin Deprivation & Threat Scales<sup>5</sup>, Healthy-Unhealthy Music Scale<sup>6</sup> (HUMS), and the Connor-Davidson Resilience Scale<sup>7</sup> (CD-RISC-10)
- All retrospective adversity measures were reported for both childhood (6-12 years) and adolescence (13-18 years)
- Participants also completed the Extended Barcelona Music Reward Questionnaire<sup>8</sup> (eBMRQ) in the previous study

### STUDY 2:

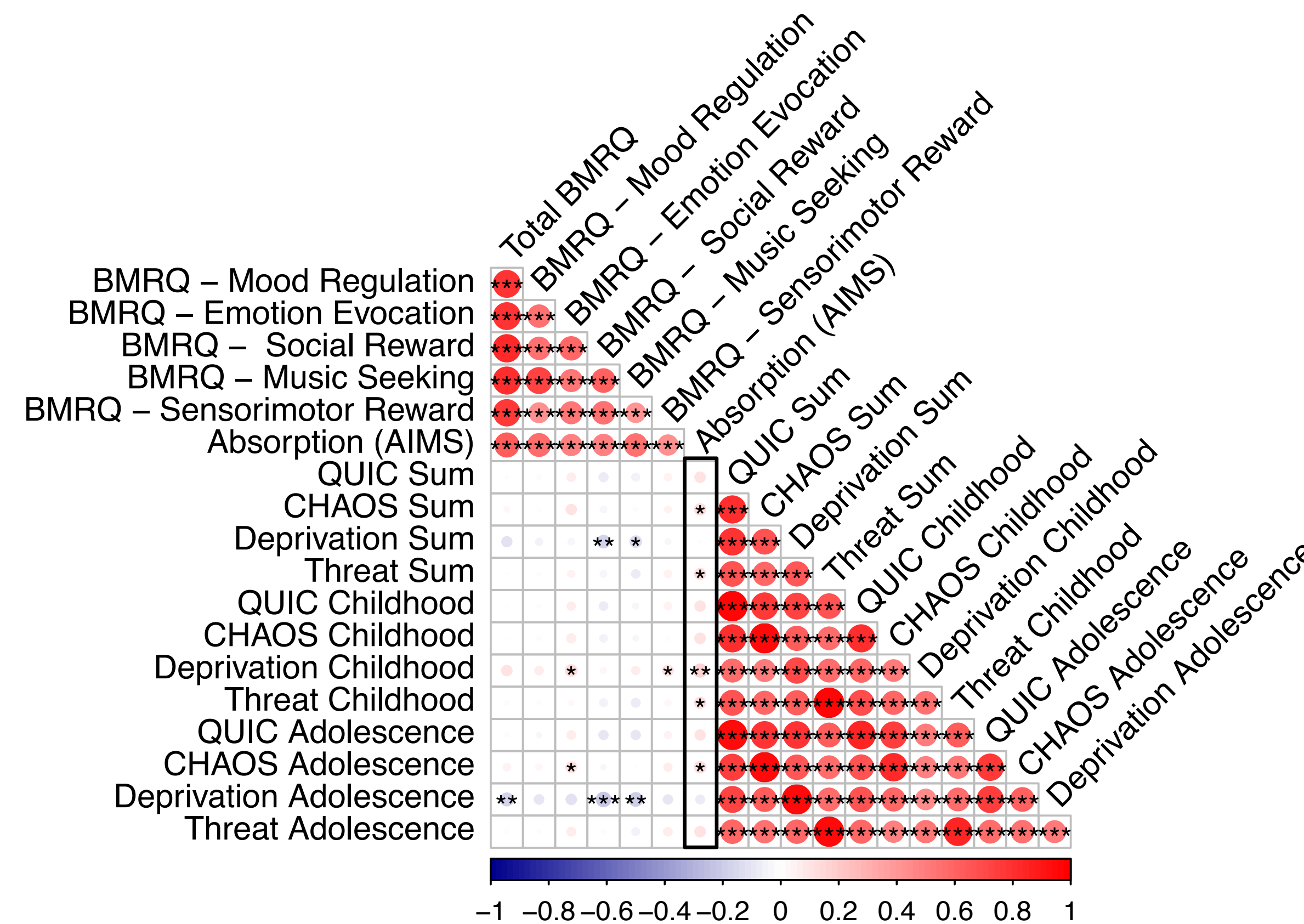
- 288 participants (141F) recruited through Prolific from another previous experiment
- Participants completed the QUIC, the full CHAOS, McLaughlin Deprivation & Threat Scales, the CD-RISC-10, and the Escapism Scale<sup>9</sup> adapted for music
- For a more sensitive measure of absorption into music, participants also completed the Absorption in Music Scale<sup>10</sup> (AIMS)
- Participants also completed the Barcelona Music Reward Questionnaire<sup>11</sup> (BMRQ) in the previous study

## Study 1: All dimensions of ELA are positively associated with reports of absorption into music

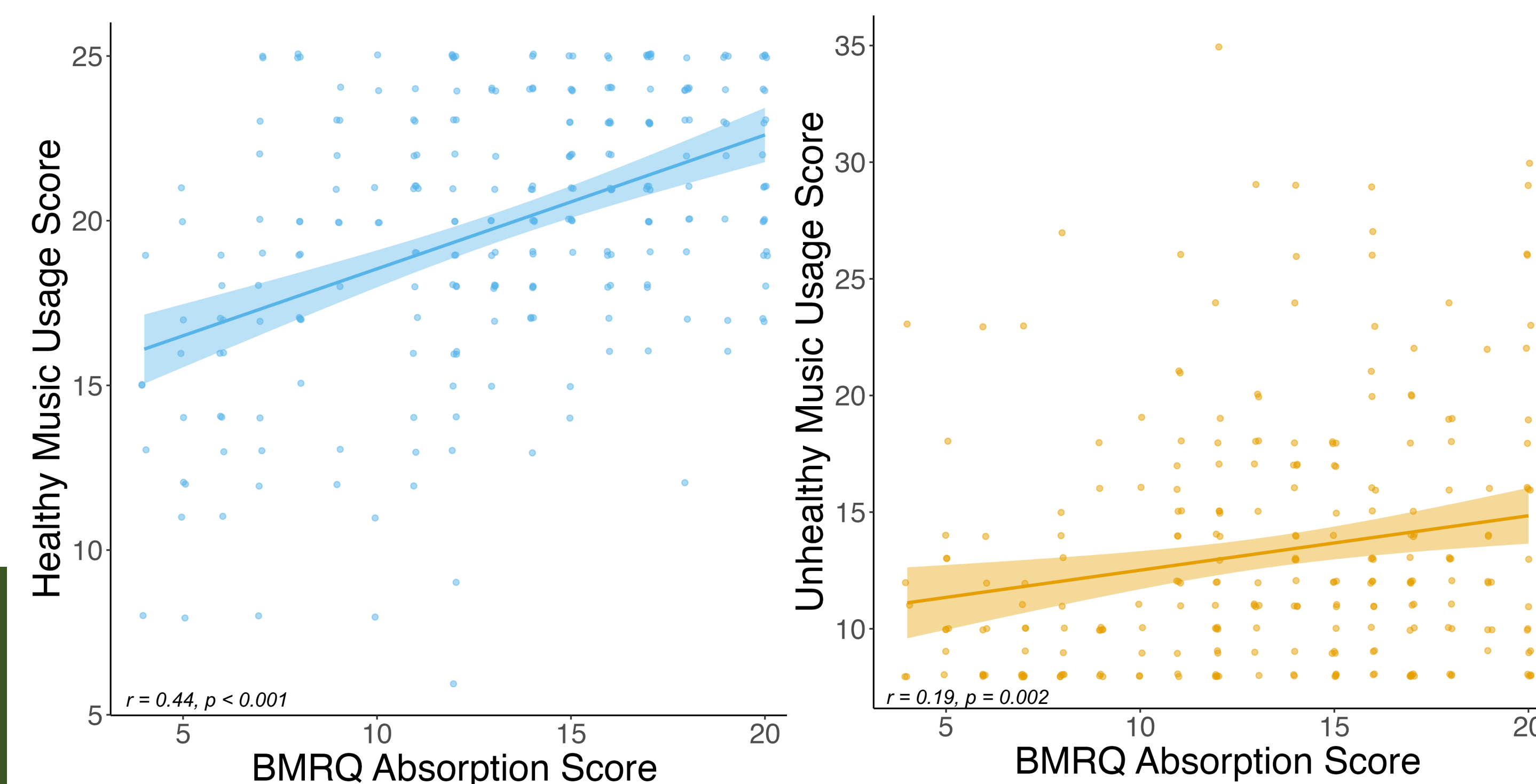


- Absorption: “an individual’s ability to ability and willingness to allow music to draw them into an emotional experience”<sup>10</sup>
- “While listening to music, I may become so involved that I may forget about myself and my surroundings.”

## Study 2: Conceptual replication of associations for CHAOS and Threat Scores with absorption (via AIMS)

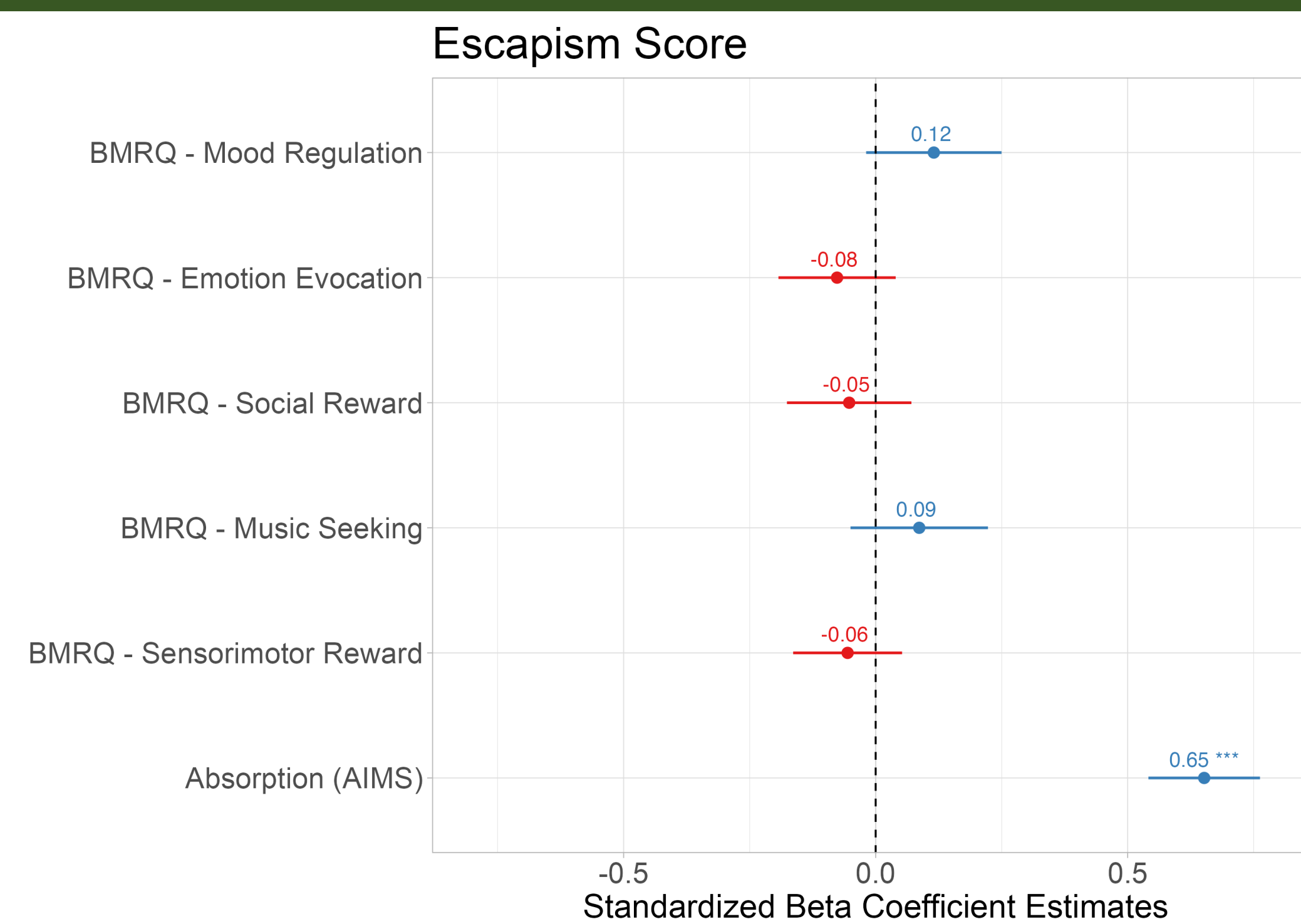


## Study 1: Absorption into music relates to adult music usage



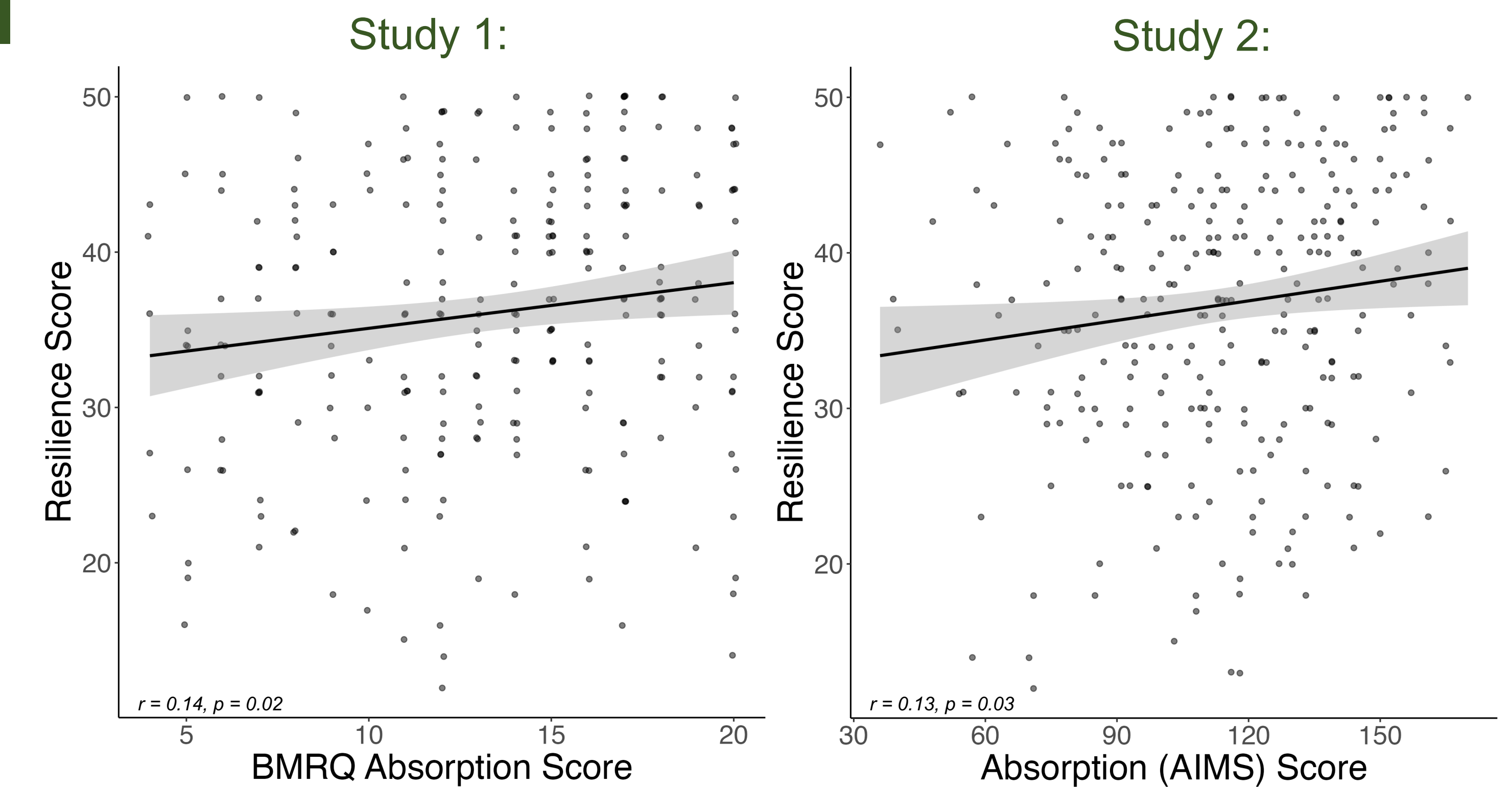
- Items on the HUMS scale indicate music listening as a form of escapism:  
“I hide in my music because nobody understands me, and it blocks people out”

## Study 2: Absorption into music associated with using music for escapism

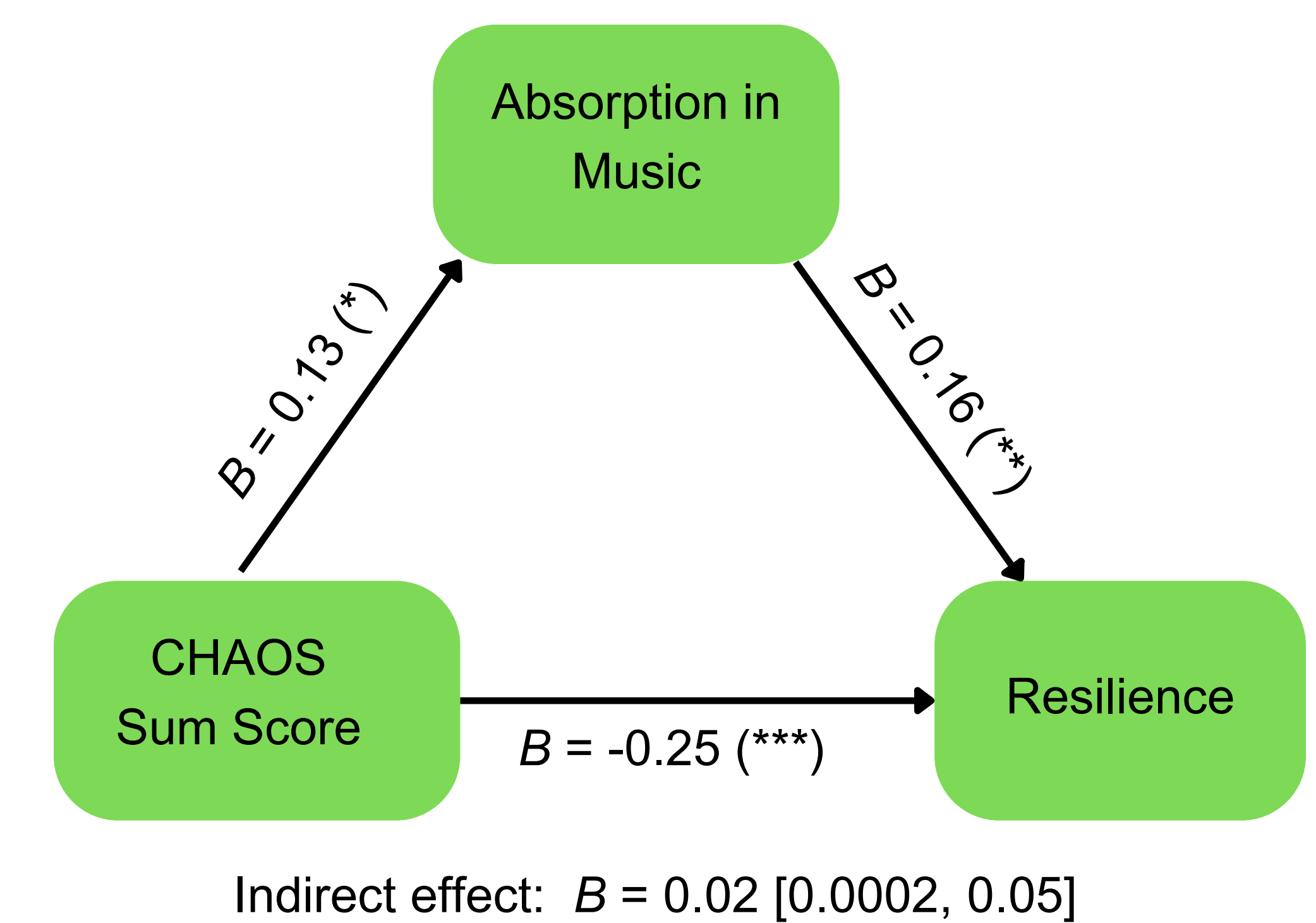


Model: Escapism ~ Mood Regulation + Emotion Evocation + Social Reward + Music Seeking + Sensorimotor Reward + Absorption

## Is absorption into music adaptive following adversity?



## Study 2: Absorption mediates the relationship between CHAOS & resilience



### DEVELOPMENTAL TIMING:

AIMS scores did not mediate this relationship for childhood CHAOS scores (indirect effect:  $B = 0.02$  [-0.001, 0.05]), but it did for adolescent CHAOS scores (indirect effect:  $B = 0.02$  [0.001, 0.05]).

## Discussion

- Individuals who report experiencing early life adversity also report being highly absorbed by music.
- This relationship is observed in retrospective reports of both childhood and adolescence experiences.
- “Escaping” adverse contexts into music is one way individuals with ELA develop resilience.
- AIMS did not mediate the relationship between exposure to threat and resilience because it is likely not advantageous to psychologically escape these contexts.
- CHAOS – AIMS – Resilience mediation driven by adolescent CHAOS scores, likely due to increased agency in music listening during this time.<sup>12</sup>

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