

# Psychopathic traits and the representation of others' emotional states

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## Conclusions

Individuals with higher self-rated psychopathic traits show less mimicry to emotional expressions and lesser autonomic responses to pain in others, suggesting that they have less powerful internal representations of others' emotional states.

## Background

Evolutionary game theory predicts that prosocial traits will be non-uniformly distributed in the human population. Individuals with very low prosocial traits may receive a medical diagnosis of psychopathy or antisocial personality disorder. One neurophysiological mechanism generating prosocial motivation is the empathic representation of others' emotional states in brain networks overlapping those brain networks that represent own emotional states.

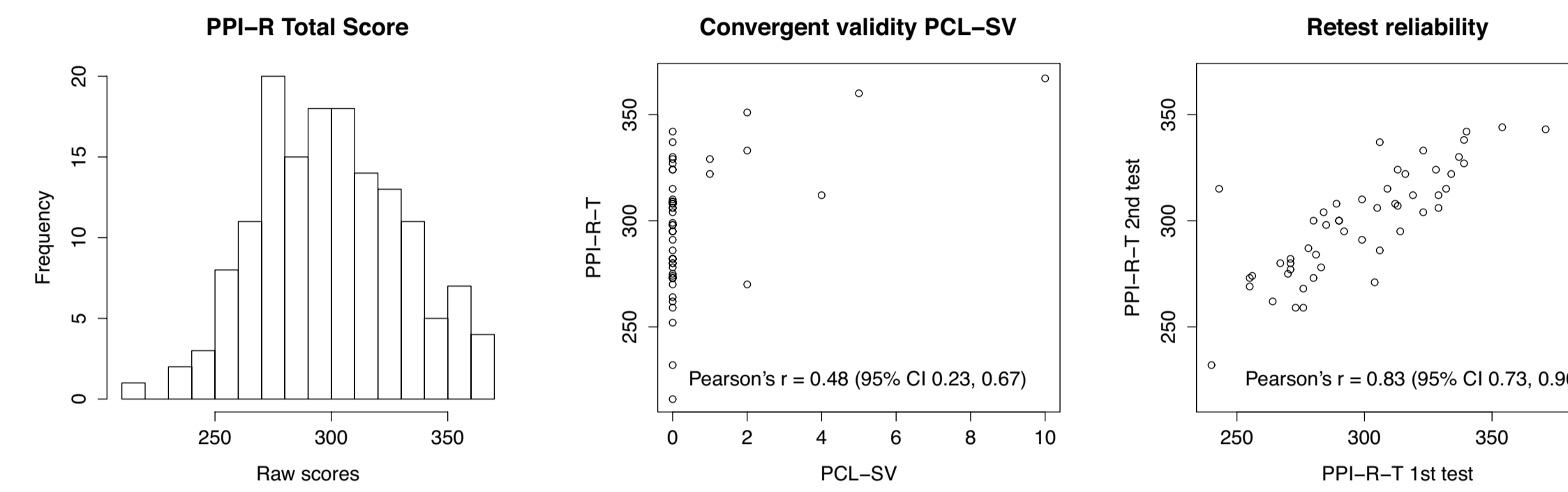
## Validation of the Psychopathy Personality Inventory-Revised in Swedish

We validated the Psychopathy Personality Inventory-Revised (PPI-R) in Swedish, thus enabling us to measure psychopathic personality traits. We found that PPI-R total scores were approximately normally distributed in our sample, indicating that psychopathic traits are dimensional and not taxonic. The translated instrument showed good convergent validity and retest reliability.

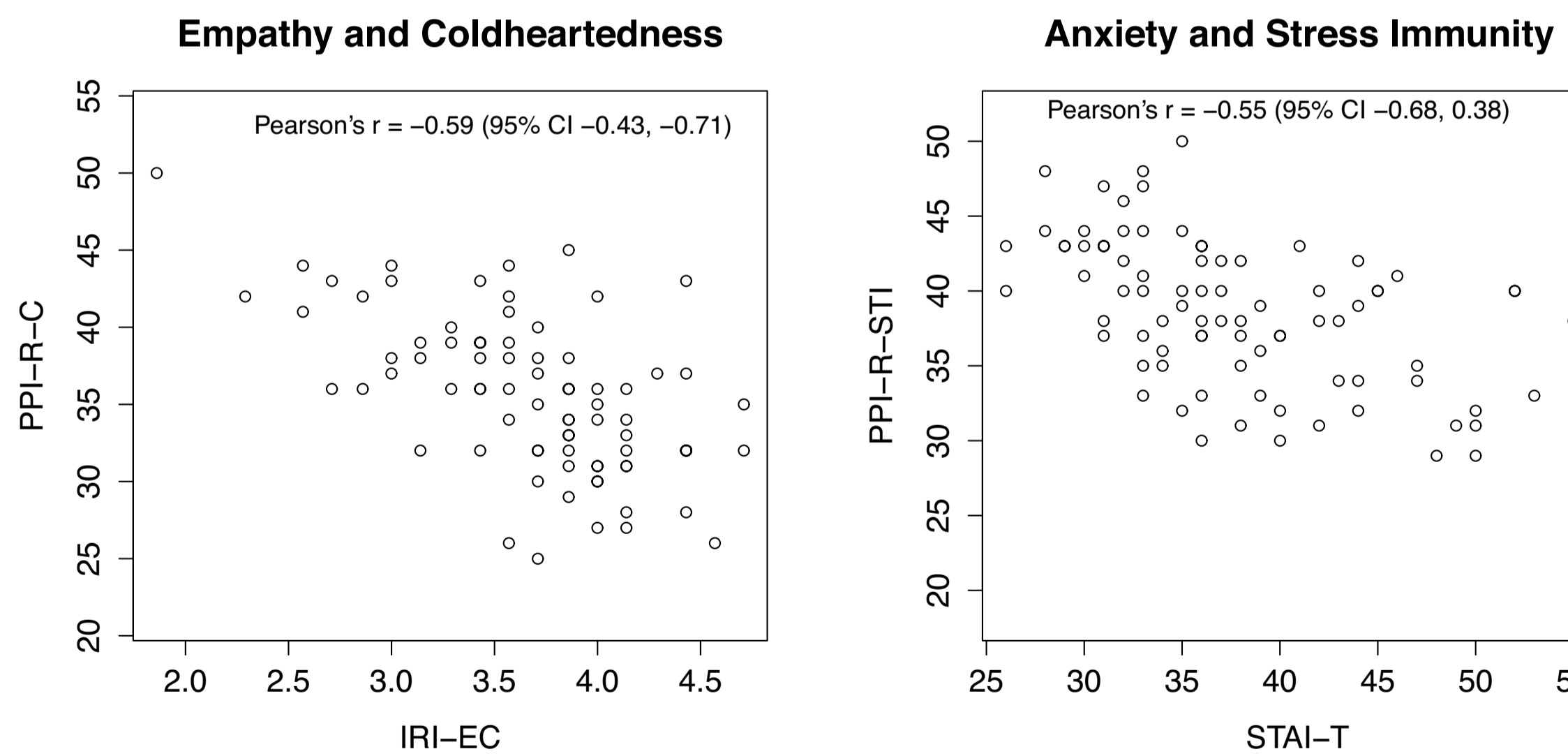
## Effect of psychopathic traits on emotional mimicry and empathy

Emotional mimicry was measured by electromyography of facial muscles as participants viewed film clips showing different facial expressions. Psychopathic coldheartedness predicted lower muscle responses to happy faces but did not predict muscle responses to angry faces. Empathy was measured by self-rated unpleasantness and skin conductance responses as the subject observed another person in pain. Psychopathic coldheartedness predicted lower self-rated and skin conductance responses to the other's pain.

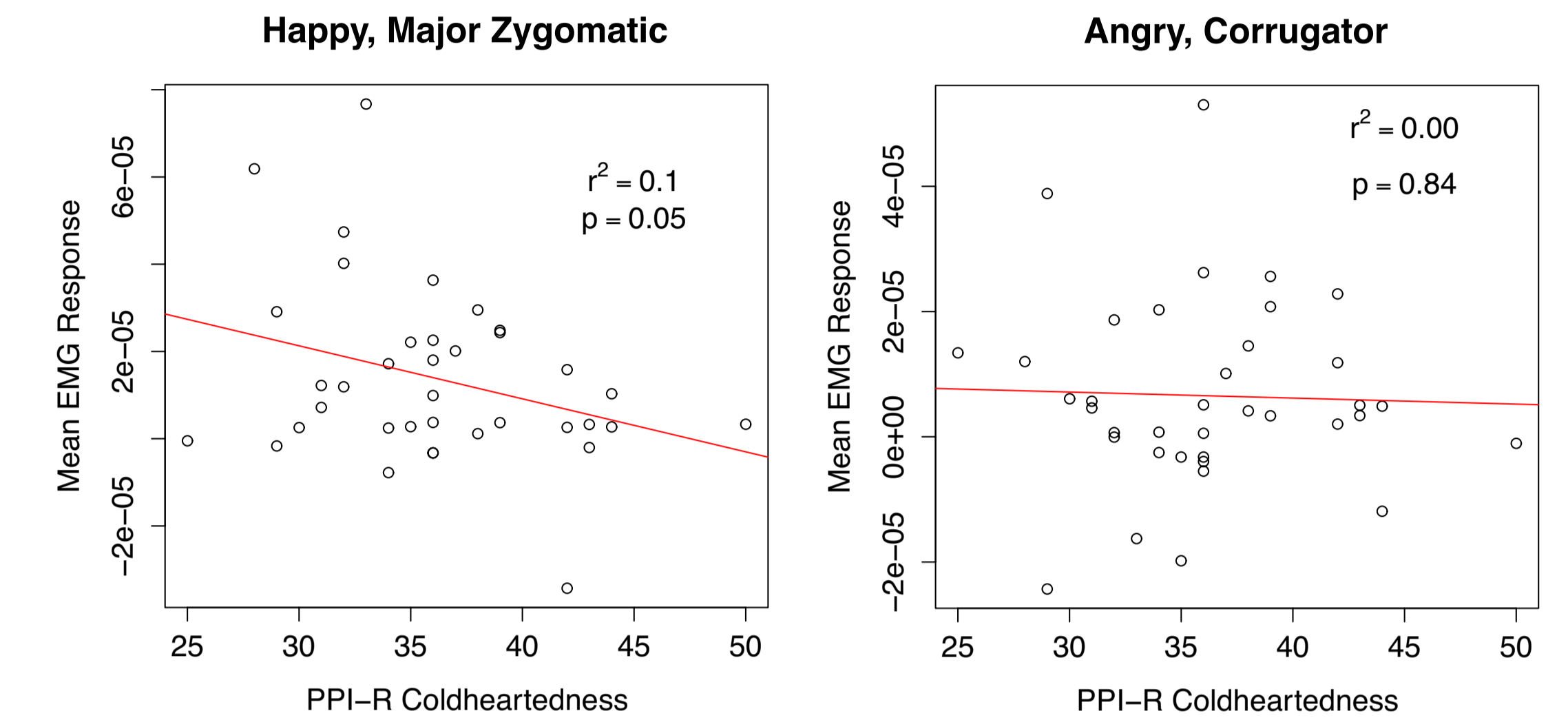
## Validation of the Swedish Psychopathy Personality Inventory-Revised



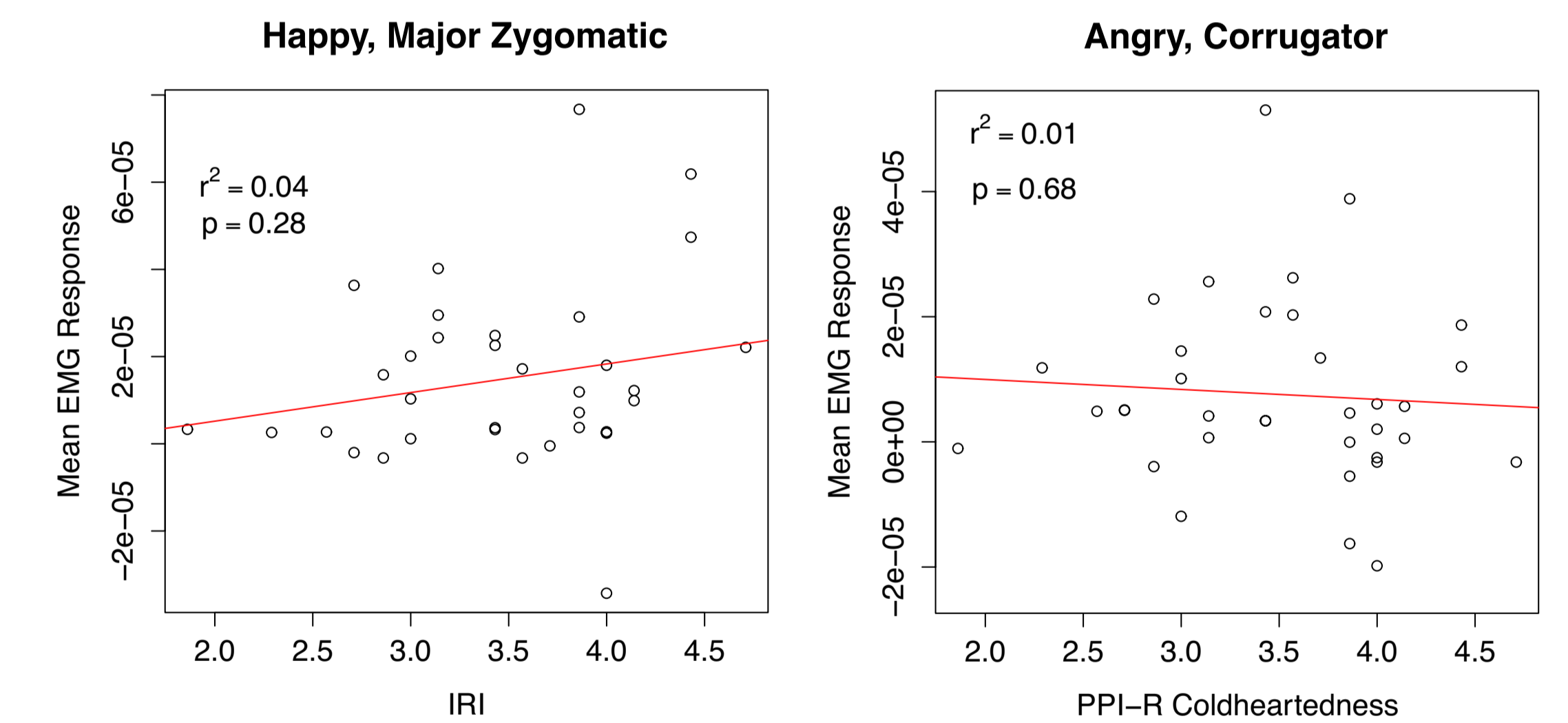
## Convergent validity of PPI-R subscales



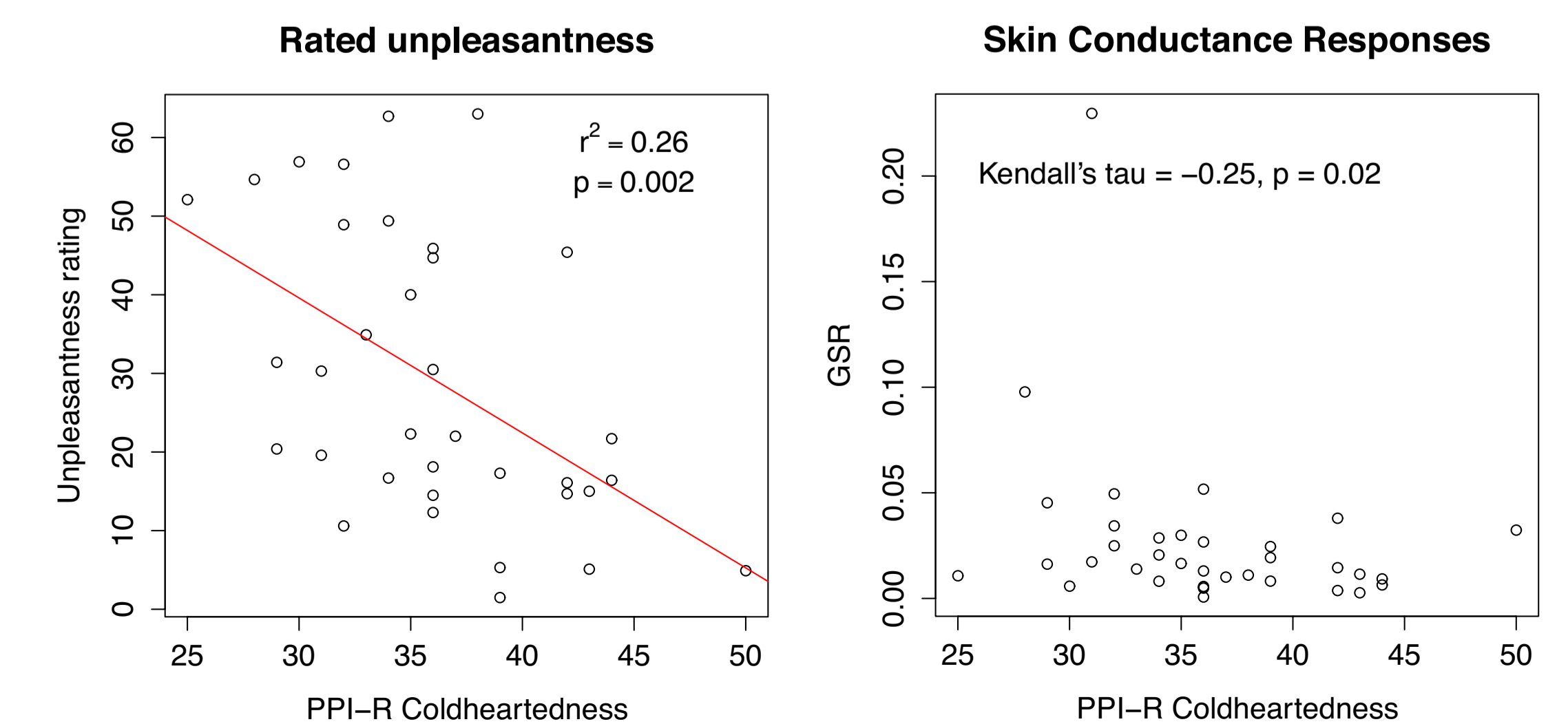
## Emotional contagion and psychopathic traits



## Emotional contagion and trait empathy



## Empathy and psychopathic traits



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