

UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Empathy-related differences in emotional valence perception: evidence from the Interpersonal Reactivity Index (IRI)

Permalink

<https://escholarship.org/uc/item/10q8f4dg>

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 48(0)

Authors

Gabiatti, Victor Nogueira Dias
Toro Hernandez, Felipe D
Ramalho, Theresa Moraes
et al.

Publication Date

2026

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed

Empathy-Related Differences in Emotional Valence Perception: Evidence from the Interpersonal Reactivity Index (IRI)

Victor N. D. Gabiatti

CMCC - Center of Mathematics, Computation and Cognition, UFABC - Federal University of ABC, São Bernardo do Campo, Brazil

Felipe D. Toro-Hernández

CMCC - Center of Mathematics, Computation and Cognition, UFABC - Federal University of ABC, São Bernardo do Campo, Brazil

Theresa M. Ramalho

CMCC - Center of Mathematics, Computation and Cognition, UFABC - Federal University of ABC, São Bernardo do Campo, Brazil

Andre M. Cravo

CMCC - Center of Mathematics, Computation and Cognition, UFABC - Federal University of ABC, São Bernardo do Campo, Brazil

Peter M. E. Claessens

CMCC - Center of Mathematics, Computation and Cognition, UFABC - Federal University of ABC, São Bernardo do Campo, Brazil

Considering empathy as a multidimensional construct with cognitive and affective components, we examined the relationship between individual empathic traits and emotional perception. An online survey was conducted with 37 participants, who completed the Brazilian version of the Interpersonal Reactivity Index (IRI) and evaluated human emotional vocalizations in terms of valence and arousal. Data were analyzed using repeated-measures analyses of variance (ANOVAs), showing that emotional categories significantly influenced valence ($F(3, 108) = 99.96, p < .001$) and arousal judgments ($F(3, 108) = 15.82, p < .001$), indicating systematic variation in pleasantness and intensity ratings, respectively. By integrating all stimuli into a general linear model (GLM), we observed a significant interaction between valence and IRI scores ($t(292) = 3.28, p = .0012$), indicating stronger valence modulation among highly empathetic participants. No significant interaction emerged regarding arousal judgments. Overall, the results indicate that IRI scores are reliably associated with participants' performance in valence recognition.