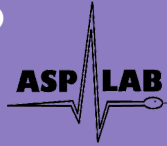




The Embodied Mind: The relationship between sensitivity to body sensations and mental health



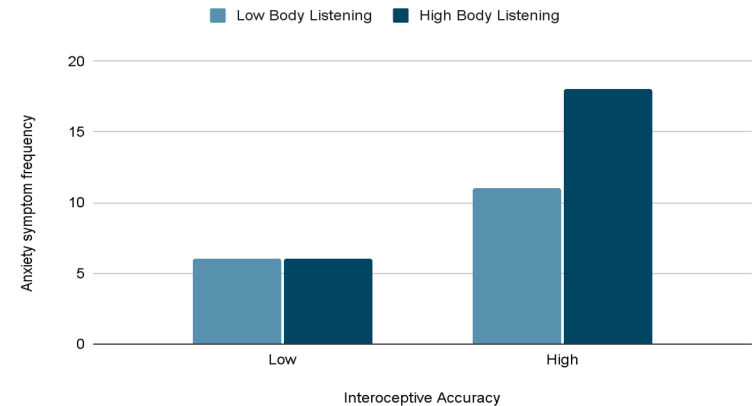
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Introduction

- **Interoception:** The central nervous system's conscious and unconscious processing of inner body systems (e.g. heart, respiratory system, gastrointestinal tract).¹
- **Interoceptive Accuracy:** The ability to accurately perceive internal body stimuli.¹
- Previous research has demonstrated that interoceptive accuracy is associated with increases in the severity of anxiety symptoms, and is associated with anxiety disorders.²
- However, it is unclear how a person's interpretation of their own interoceptive sensations influences the relationship between Interoceptive Accuracy and severity of anxiety.
- **Body Listening:** The degree to which a person listens to their body sensations.³
- We predict Body Listening will moderate the relationship between interoceptive accuracy and anxiety symptoms frequency.
 - For people with high interoceptive accuracy, the higher their body listening score the more frequent their anxiety symptoms.
 - No effect of body listening on anxiety symptoms frequency for people with low interoceptive accuracy.

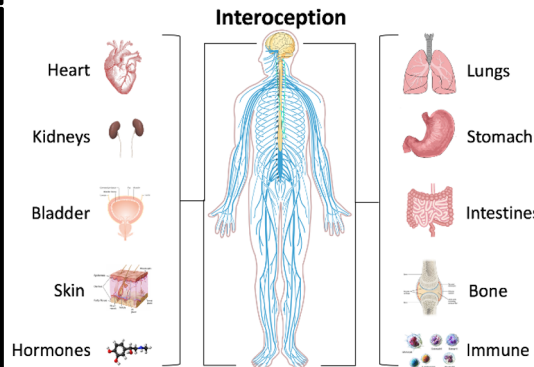


Predicted Results



Methods

- General population (N= 400)
- **Interoceptive Accuracy:** Heartbeat Detection Task⁴
 - Participants must indicate whether a series of 10 audio tones triggered by their own heartbeats is either coincident or non-coincident with their felt heartbeats.
- **Body Listening:** Multidimensional Assessment of Interoceptive Awareness (MAIA) questionnaire³
 - Self-reported frequency of interoceptive awareness using a 0-5 scale (0= never; 5 = always).
 - Three questions from the Body Listening subscale:
 - "I listen for information from my body about my emotional state."
 - "When I am upset, I take time to explore how my body feels."
 - "I listen to my body to inform me about what to do."
- **Anxiety symptoms:** Generalized Anxiety Disorder Screener (GAD-7)⁵
 - Self-reported frequency of anxiety symptoms using a 0-3 scale (0= not at all; 3= nearly every day).



Discussion

- Body Listening will moderate the relationships between Interoceptive Accuracy and frequency of anxiety symptoms.
- People with a more accurate perception of body sensations (e.g. their heartbeat) will only experience more frequent anxiety symptoms if they also listen to and monitor the information from their body.
- Theoretical implication: may clarify mixed findings in past studies
- Practical implication: we identify a subjective dimension of interoception (Body Listening) that may also affect anxiety over and above objective interoceptive accuracy.

References

- (1)Khalsa, S. S., Adolphs, R., Cameron, O. G., Critchley, H. D., Davenport, P. W., Feinstein, J. S., Feusner, J. D., Garfinkel, S. N., Lane, R. D., Mehling, W. E., Meuret, A. E., Nemeroff, C. B., Oppenheimer, S., Petzschner, F. H., Pollatos, O., Rhudy, J. L., Schramm, L. P., Simmons, W. K., Stein, M. B., ... Zucker, N. (2018). Interoception and Mental Health: A Roadmap. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 3(6), 501–513. (2) Pollatos, O., Traut-Mattausch, E., Schroeder, H., & Schandry, R. (2007). Interoceptive awareness mediates the relationship between anxiety and the intensity of unpleasant feelings. *Journal of Anxiety Disorders*, 21(7), 931–943. (3) Mehling, W. E., Price, C., Daubenmier, J. J., Acree, M., Bartmess, E., & Stewart, A. (2012). The multidimensional assessment of interoceptive awareness (MAIA). *PLoS one*, 7(11), e48230. (4) Whitehead, W. E., Drescher, V. M., Heiman, P., & Blackwell, B. (1977). Relation of heart rate control to heartbeat perception. *Biofeedback and Self-regulation*, 2(4), 371-392. (5) Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine*, 166(10), 1092–1097.