

Experience and Arousal: Exploring the Relationship Between Coherence and Well-Being Through the Role of Acceptance

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Background

- Experience-physiology coherence relates to how an individual physiologically responds to an experience.
- Relies on emotional awareness. High awareness can lead to better emotion regulation which correlates to overall well-being (the presence of good things and the absence of bad)
- This study used a within-subject design to study the relationship between emotional experience and physiological response IBI.
- Interbeat Interval (IBI) refers to the time (in ms) between subsequent R waves. Used as an indicator of fluctuations in heart rate.
- Studies have found positive associations between coherence and well-being (Brown et al., 2020; Sommerfeldt et al., 2019), as well as no association (Van Doren et al., 2021).

Hypothesis: Coherent responses are positively associated with indicators of well-being through the mediating role of emotional acceptance.

Method

- Participant Information
 - 58 males recruited from the greater Tucson area with the median age of 27
 - Part of a larger study relating to couples and health behaviors
- Data Recording
 - Video-recorded conversations about a series of topics
 - Physiological data of heart rate and IBI were recorded during the conversation.
 - After the conversation, participants rated emotional experience from negative to positive.
 - Used a cross correlation to combine the physiological data of IBI with how participants rated their emotional experience, obtaining our measure of coherence
 - Used three item measure to gauge how aware and accepting of emotions

Results

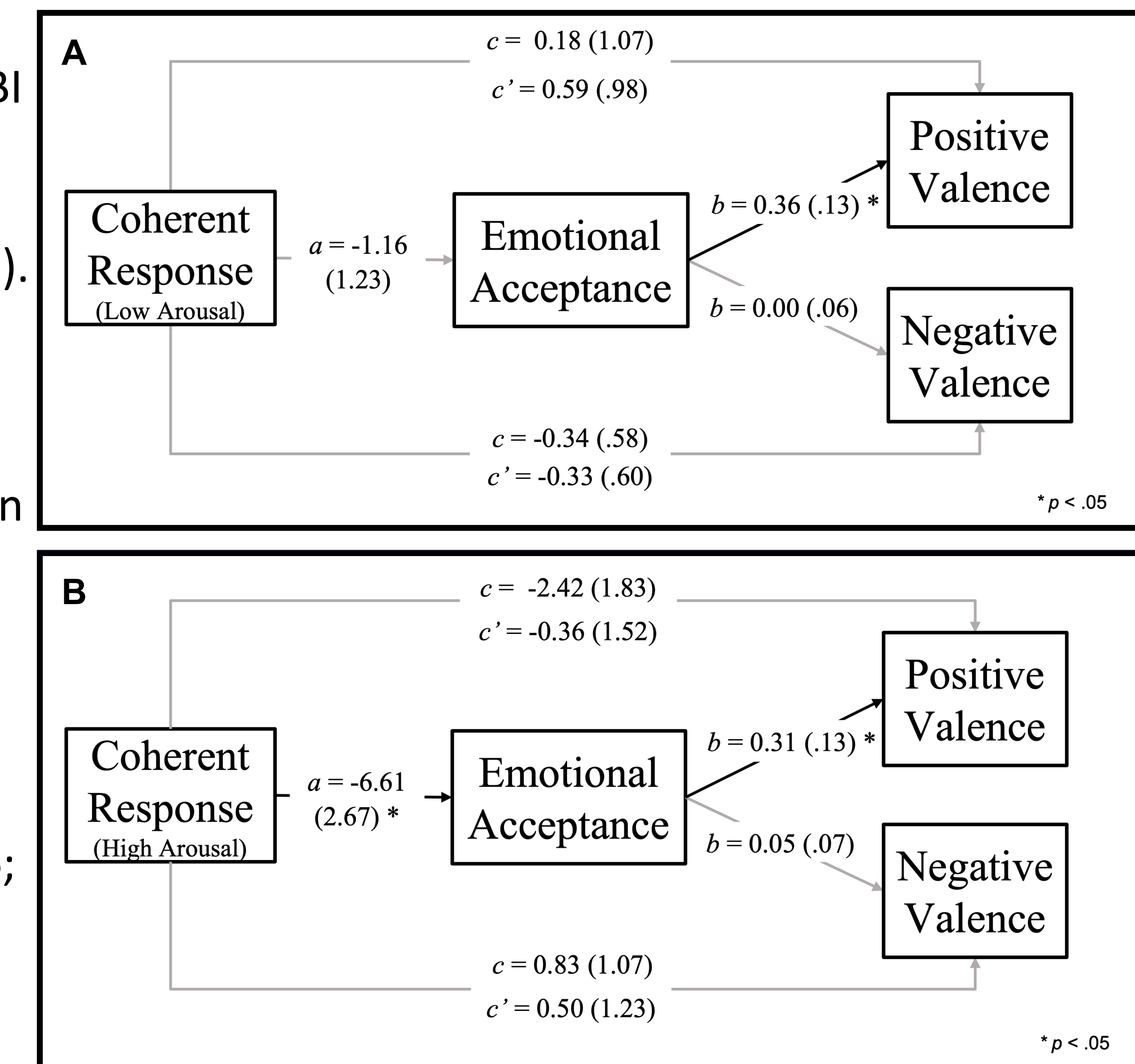
- Thirty-six participants (62%) exhibited low arousal coherence, such that greater positive valence was associated with higher IBI (i.e., decreased heart rate). The remaining 22 participants exhibited high arousal coherence, such that higher positive valence was associated with lower IBI (i.e., increased heart rate).
- We used mediation analysis to test our hypothesis for each group separately.

Low Arousal Coherence (Panel A):

- Emotional acceptance did not mediate the relationship between low arousal coherence and well-being. However, we did find that greater reports of emotional acceptance were significantly related to higher positive valence.

High Arousal Coherence (Panel B):

- Emotional acceptance significantly mediated the association between coherence and positive valence (*indirect effect* = -2.06; 95% CI: -5.14, -0.34). Specifically, participants exhibiting high arousal coherence were less likely to accept their emotions, which lead to greater reports of positive valence.



Conclusions and Implications

Conclusions:

- Coherent responses are generally related to well-being, but not significantly related
- Although emotional acceptance is strongly correlated to overall well-being, it only partially mediated the relationship between coherence and well-being.
- People exhibiting high arousal coherence tended to be more aroused, which showed a significant relationship with accepting their emotions less
- Participants exhibiting low arousal coherence tended to be more calm, which did not display a significant relationship with accepting emotions
- Since emotional acceptance is significantly correlated to well-being, and the participants who displayed high arousal coherence were more likely to reject their emotions, emotional acceptance may be seen as a mediator between coherence and well-being.

Limitations

- Sample size lacked generalizability, and may not be an accurate depiction of all of Tucson
- Using self reported data from participants in regards to both emotional experience and acceptance may not be 100% accurate due to bias

Implications

- Emotional acceptance showed a positive correlation with overall well-being, regardless of high or low arousal coherence.
- Emotional acceptance can only be seen as a possible mediator for high arousal coherence, so another variable may mediate low arousal coherence and well-being.
- High levels of arousal may be a catalyst to why people are less likely to accept their emotions.