

Emotion Coherence Between Subjective Experience and Physiology During a Positive Interaction

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Background

Emotions involved coordinated responses across various emotion systems (e.g., physiological, experiential, behavioral). Coherence between subjective experience and physiology implies greater emotional awareness (i.e., mind-body communication) and is thought to be associated with greater well-being.

- Prior empirical research has generally found positive associations between subjective experience-physiology coherence and well-being for individuals who exhibit awareness of their own mental state (e.g., Brown et al., 2020; Sommerfeldt et al., 2019). In contrast, active attempts to deny, suppress, or alter emotions have been shown to disrupt coherence (Butler, et al., 2014).
- Large focus on coherence during emotionally charged situations such as watching emotion-inducing film clips (Rattel et al., 2020) or during tasks designed to provoke anger and induce stress (Evers et al., 2014; Mejia-Mejia et al. 2017). Less is known about the links between coherence, awareness, and well-being in primarily pleasant, low arousal situations.

In the current study, we assessed coherence between emotional experience and skin conductance – a pure measure of sympathetic – during a supportive, pleasant interaction. Coherence between these response systems should lead to higher well-being (defined as the presence of positive emotion and absence of negative emotion) through the role of emotional awareness.

Hypothesis: The relationship between coherence and well-being is mediated by greater emotional awareness of both one's own and other's emotional states.

Method

The data comes from a larger study of health behavior in self-identified heterosexual romantic couples during their first year of cohabitation. The data for the present study comes from the laboratory session and includes 68 couples (i.e., 136 individuals) who had usable data on all relevant measures.

Coherence was assessed during the support conversation by calculating cross-correlations between skin conductance and continuous reports of subjective experience (0 = Very Negative to 5 = Very Positive).

Well-Being: Participants reported the extent to which they felt 10 discrete emotions following the conversation using a 5-point face-valid scale (0 = Not at all to 4 = A very large amount).

- **Positive Valence:** A composite score of 5 discrete positive emotions
- **Negative Valence:** A composite score of 5 discrete negative emotions

Emotional Awareness: Participants reported things they might have felt, thought, or done during the conversation. All items were rated on a 7-point scale (-3 = Very much disagree to 3 = Very much agree).

- **Emotional Acceptance:** Three items gauged the extent to which participants were aware of and accepting of the emotions they experienced during the conversation
- **Emotional Connection:** Three items gauged the extent to which participants were aware of and felt connected to their partner's emotions during the conversation

Results

Parallel mediation analyses were conducted in R (v 3.6.3; R Core Team) separately for men and women. Direct and specific indirect effects were tested with bootstrapping confidence intervals (10,000 samples) using the LAVAAN package (v 0.6-10; Roseel, 2012).

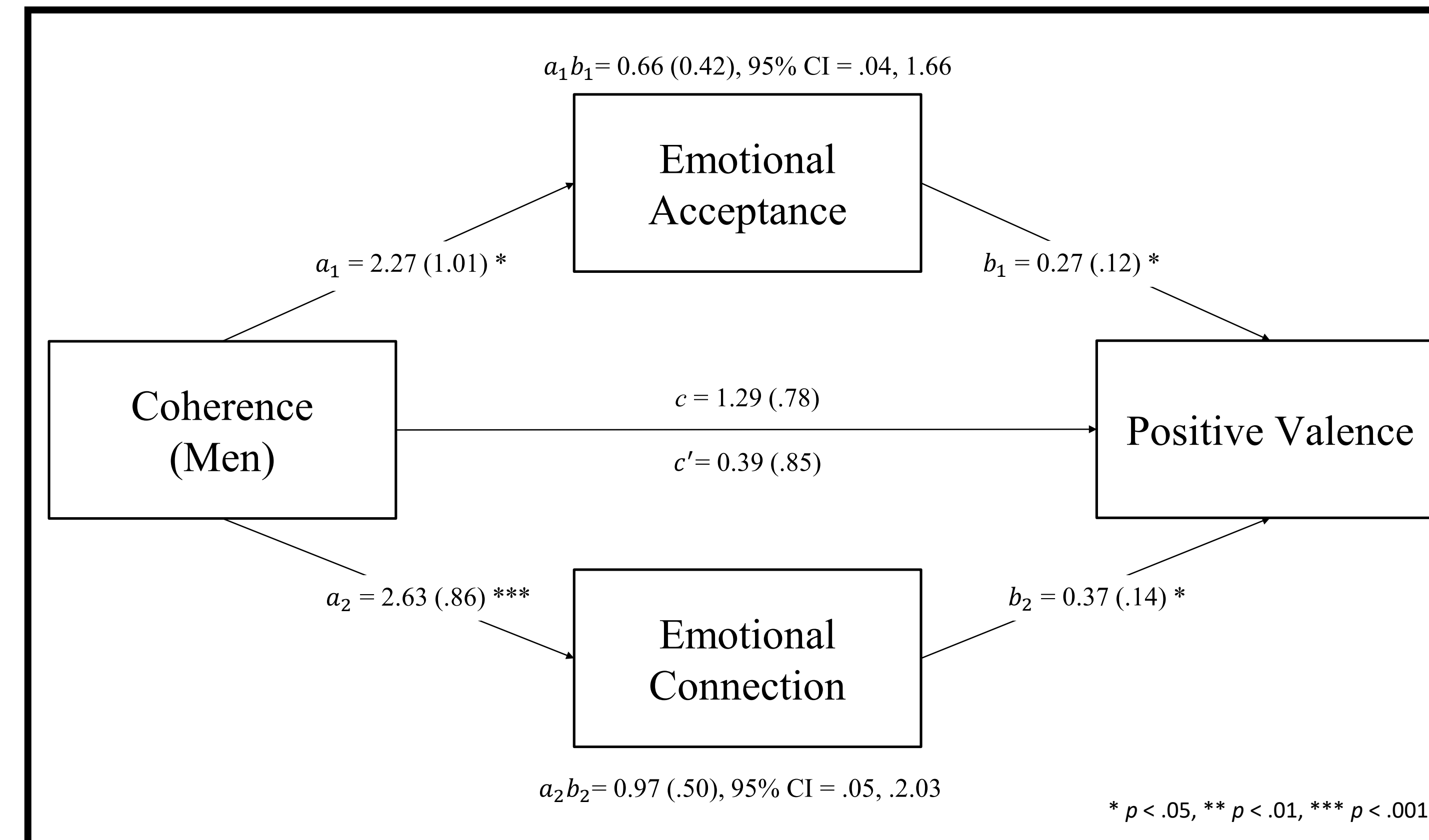


Figure 1. For men, greater coherence predicted higher emotional acceptance and connection to their partner, leading to more heightened positive emotion following the conversation.

- The coefficients are both positive effects. The effect of acceptance on positive valence was positive. The more men accepted their emotions, the more positive they felt at the end of the conversation.

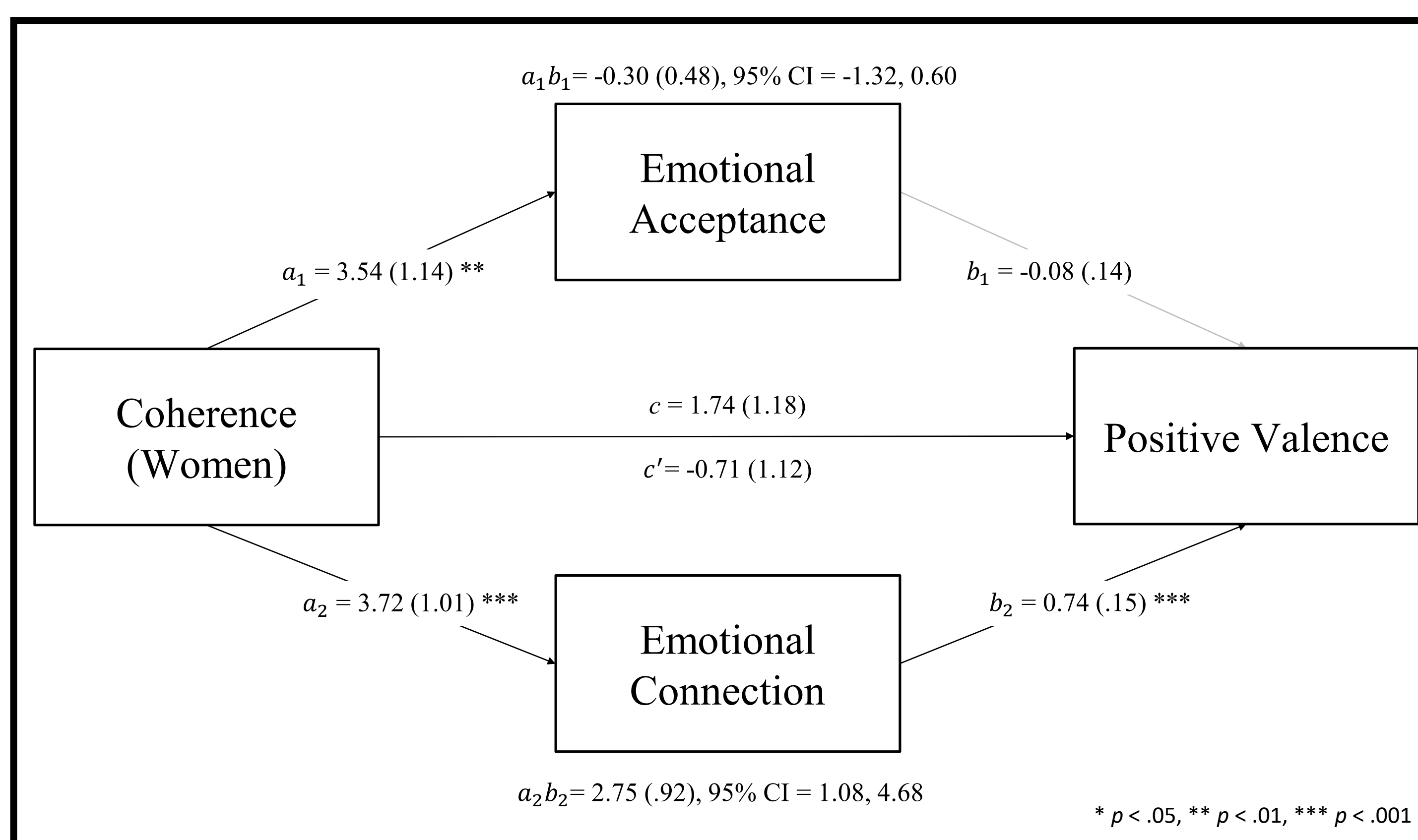


Figure 2. For women, the only connection is the ability to recognize and connect with their partner, so the awareness of their partner's emotions mediates the association. Further, greater coherence predicted higher acceptance, but acceptance did not relate to positive feelings following the conversation. Thus, unlike the men, where acceptance and connection were significant mediators, only connection is a significant mediator for women.

Conclusions and Implications

According to our theoretical model, a coherent response during a supportive context would lead to more emotional acceptance and would also lead to more emotional connection. Because we accept our emotions and connect more, we're probably going to feel more positive (plus) and less negative (minus sign). Our study has consistent findings that acceptance and connection mediate the association between coherence and positive emotion following the conversation. It leads us to connect and accept our emotions more and leads to more positive valence for both men and women, except that acceptance doesn't relate to positive emotions for females.

- Men who had coherent responses during the supportive conversation were led to accept their emotions more and connect with their partner more, which predicted a higher positive feeling following the conversation. Emotional acceptance & connection are both significant mediators because the confidence interval does not include zero for both of these effects. Making sense of the coherent response during a supportive context is associated with higher positive emotion because we accept our feelings and connect with our partners. Results support our hypothesis that both emotional acceptance and emotional connection significantly mediated that association between coherence and positive emotion, suggesting that coherence is related to higher well-being through greater emotional awareness during that supportive context.
- We see something very similar for women, except that the "acceptance of positive emotion path" is insignificant for the women. Whereas both acceptance and connection mediate that association for men, only the connection to our partner mediates the association between coherent responses and positive emotion for women.

Although we didn't set out to identify sex differences, our results revealed differences between men and women. Rattel et al. (2020) research found higher response concordance in women than men across physiological and behavioral measures. Further, women are better than men at recognizing emotions, expressing themselves more easily, paying more attention, and being more aware of their feelings. However, our study shows that for women, only the awareness of their partner led to more positive valence following the conversation, and awareness of their own emotions didn't relate to positive feelings following the discussion. This could be due to women being social norms. Women are taught and expected to be accommodating in relationship dynamics, making sure everyone else is happy and subverting their own emotions and desires. Future studies should further attempt to clarify whether sex itself moderates, or if sex is a factor that affects that relationship.

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