



Interplay Between Infant Temperamental Fear and Attention: A Longitudinal Cross Panel Analysis

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Introduction & Hypotheses

- Understanding the early links between emotion and attention/self-regulatory processes, and the interplay between them, are potentially important given the role of these processes in children's later outcomes¹.
- Existing work has noted several patterns:
 - Work, mostly in older children and adults², has noted the importance of top-down attention and regulatory mechanisms for the regulation of emotional processes.
 - In contrast, several existing studies, mostly using infants³⁻⁴, suggest that emotional processes, such as aspects of negative affectivity, may disrupt later developing attentional mechanisms.
 - Finally, across many ages, studies have noted inverse associations between attention/self-regulation and negative affectivity.
- To our knowledge no studies have examined bi-directional associations between aspects of negative affectivity, such as fearfulness, and attention processes during a period (i.e. the end of the first year of life) of time wherein the executive attention network is coming online⁵.
- To address issues regarding the direction and timing of the effects of fearfulness and attention on each other, we employed a longitudinal cross-panel design.
- We anticipated that fear would influence attention earlier during infancy whereas later in infancy, corresponding more closely to the coming online of the executive attention network, we anticipated attention to influence fearfulness.

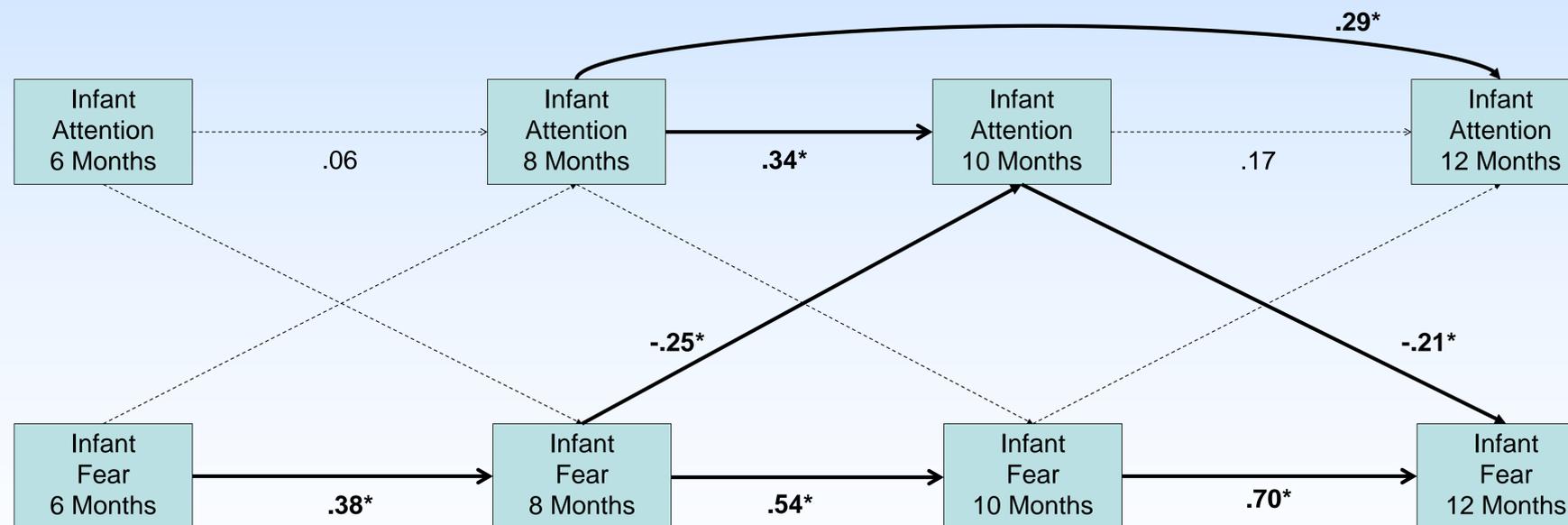
Methods & Procedure

- Participants**
 - Infants (N = 147; 50.8% boys) attended laboratory sessions at 6, 8, 10, and 12 months of age. Most were Caucasian (91.9%); most primary caregivers reported being married (93.1%). 62.8% of families had an income of ≥ \$30,000.
- Measures**
 - Attention – Assessed using the Arc of Toys task from Lab-TAB⁶
 - Duration of Looking at Toys/Objects
 - Manipulation of Toys
 - Attention was a composite of Duration of Looking and Manipulation
 - Inter-rater agreement: Duration of Looking = .71; Manipulation = .66.
 - Fear
 - Lab-TAB Masks Episode⁶ – Intensity of Fear, Distress Vocalizations, Bodily Fear, and Escape Behavior
 - IBQ-R⁷ – Fear subscale
 - Fear composite was the mean of the IBQ-R Fear subscale and mean of the fear indices from the Masks Episode
 - Inter-rater agreement: Intensity of Fear=.75; Distress Vocalizations=.95, Bodily Fear=.63; Escape Behavior=.79.

Discussion

- Findings were generally as anticipated.
 - Earlier during infancy, higher fearfulness contributed to subsequently poorer attention
 - Later, better infant attention appeared to start regulating fearfulness, potentially in a top-down manner
- These findings provide an important glimpse into the origins of the inverse relationship between attentional/self-regulatory mechanisms and negative affectivity.
- Findings also illustrate the greater stability of fear over the first year of life, relative to the instability of infant attention, perhaps reflecting greater maturity of emotional systems during infancy, and the coming online of the executive attention network towards the end of the first year.
- Given the low risk nature of the sample, and because these findings, to our knowledge, are the first to demonstrate these effects, it will be important for future studies to replicate these findings in different populations.

Results



Model Fit

$X^2 = 5.27, p > .05$
 CFI = 0.96
 SRMR = 0.028
 RMSEA = 0.00 (90% CI: 0 to .09)
 * = $p < .05$

Notes

- Analyses control for SES and infant gender, which were not significant, and are not presented to enhance clarity.
- Dashed pathways are not significant; pathways not pictured (e.g., those reflecting within time associations) are not significant, and are not pictured to enhance clarity.

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- A copy of this poster can be obtained by visiting the Emotion Regulation & Temperament Laboratory's web site at www.niu.edu/emotionreg and selecting the "Presentations" link.