Introduction

Participants possessing better ER Gaze Aversions

Two independent ratings of sensitivity were averaged to create 0.13


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- Emotion regulation (Emotion Regulation Questionnaire; 8)

- Exhibit fewer gaze aversions during their interaction with .67**

- The simulator responds to the RA due to a "caregiver"

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When an infant does become significantly upset, the 

Persistence

Future studies should assess whether the infant simulator 

Mean age = 23.42 years

Ratings were significantly correlated, 0.01

We also anticipated that higher rated sensitivity would be 

Valiente, C., Lemery

RealCare® Baby II

Both RAs independently assigned each participant a 

Participants interacted with a simulated infant:

Several episodes are available to examine infant responses 

Roberts, W., & Strayer, J. (1987). Parents' responses to the emotional distress of their children: Relations with children's Executive function (BRIEF; 10)

Exhibit fewer gaze aversions during their interaction with .67**

The simulator (a life-like, and sized doll, 3 month old infant), is programmable to a variety of user specifications (RealCare® Baby II-plus, 11)

Hypotheses

- Participants possessing better ER characteristics would:
  - Persist longer and use more techniques in their attempts to console the simulator.
  - Display more frequent signs of positive affect (i.e., smiles) and greater sensitivity while interacting with the simulator.
  - Exhibit fewer gaze aversions during their interaction with the simulated infant.
  - We also anticipated that higher rated sensitivity would be positively associated with task persistence and the number of techniques used to attempt to soothe the simulator, but negatively associated with gaze aversions.

Method - Participants

- 19 non-parents, 11 females, 8 males
- Mean age = 23.42 years
- Mean years of education = 17.00 (range = 12.00 – 24.00)
- Participants self-identified as primarily Caucasian (78.9%)

- Participants completed self-report measures of:
  - Emotion regulation (Emotion Regulation Questionnaire; 8)
  - Effortful control (Adult Temperament Questionnaire; 9)
  - Executive function (BRIEF; 10)
  - Participants interacted with a simulated infant:
    - The simulator (a life-like, and sized doll, 3 month old infant), is programmable to a variety of user specifications (RealCare® Baby II-plus, 11)

Method - Procedure

- Infant simulator paradigm
  - After being informed that the simulator responds to caregiving efforts similar to real infants (e.g., responds to voice, facial expression, and physical contact), a RA demonstrated that when distressed, the simulator can be calmed
  - The simulator responds to the RA due to a “caregiver” microchip strategically hidden on the RA.
  - During the participant’s interaction with the simulator, it was programmed for a need (i.e., feeding) that could not be met because the participant was not provided the microchip identifier. This resulted in the simulator becoming increasingly upset over repeated 255 second cycles.
  - Interaction with the simulator continues until the participant terminates the simulation.

- Coding in vivo
  - 1 RA coded gaze aversions and the number of techniques used to attempt to soothe the simulator; a 2nd RA coded the number of smiles displayed by each participant.
  - Both RAs independently assigned each participant a sensitivity rating (from 1 = not at all sensitive to 7 = extremely sensitive, 12) at the end of each episode.

Results

- Participants spent a mean of 15 minutes 3 seconds with the simulator, (3 minutes 12 seconds to 37 minutes 22 seconds).
- Two independent ratings of sensitivity were averaged to create the sensitivity variable.
- Ratings were significantly correlated, r(17) = .96, p < .05

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Associations Between Questionnaire Measures and Simulated Infant Variables

Variable | EQ Reappraise | EQ Supress | ATQ Effortful Control | BRIEF Total |
--- | --- | --- | --- | --- |
Sensitivity | 0.17 | -0.04 | 0.33 | -0.26 |
Gaze aversions per minute | -0.03 | 0.16 | -0.41* | 0.27 |
Number of smiles | 0.53** | -0.11 | 0.22 | -0.34 |
Persistence time | 0.13 | 0.16 | 0.06 | 0.01 |
Number of techniques used to attempt to soothe | 0.17 | -0.25 | 0.43 | -0.18 |

* = p < .10; ** = p < .05 for Both Tables;
rs were in the expected direction and consistent with a small or larger effect size based on Cohens’s criteria.

Associations Between Sensitivity, Persistence, Gaze Aversions, and Techniques Attempted to Soothe the Simulator

Variable | Persistence | Gaze Aversions | Techniques |
--- | --- | --- | --- |
Sensitivity | -0.46* | 0.56** | |
Persistence | --- | -0.42* | 0.75** |
Gaze Aversions | --- | --- | -0.30 |

References

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- To download a copy of this poster, please visit the Emotion Regulation & Temperament Lab website at www.niu.edu/emotionreg

Development of a Simulated Infant Paradigm: Initial Findings and Future Directions

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Conclusions

- Consistent with hypotheses, emotion-related regulation was important for how participants interacted with the infant simulator when the simulator was inconsolably distressed.

* This test feasibility study suggests that the infant simulator paradigm may be a viable means by which to examine the associations between parent characteristics (e.g., EEE) and reactions to temperamentally dysregulated infants.

Future Directions

- Future studies should include a larger pilot project with non-parents as well as pilot testing with parents.
- Researchers should evaluate how the current findings are generalizable to settings with high and low risk families.

- Future studies should assess whether the infant simulator paradigm may be used to predict interactions with real infants or to predict infant outcomes.

- The viability of the infant simulator paradigm would be supported through replication of well-established findings in the literature (e.g., if associations between maternal depression and expressions of positive affect could be established with the infant simulator task).

- Future studies should address the limitations of the current study (e.g., it may be beneficial to video record participant interactions with the infant simulator to aid in the coding of participant behaviors).