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Relations Among Maternal Intrusiveness, Infant Distractibility From Social Events, and Infant Receptive Language

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Introduction

Mothers who are more intrusive (i.e., interfering, over-controlling, focused on their own agenda during interactions; Cuevas et al., 2014) have children with poorer language outcomes (e.g., Baumwell et al., 1997) and poorer attentional control (e.g., lower levels of sustained attention; Graziano et al., 2011). Research has also shown that infants with poorer attentional control (e.g., more distractibility) have poorer language outcomes (e.g., Salley et al., 2013). However, developmental pathways to language outcomes remain unclear, as few studies have assessed maternal intrusiveness, infant attentional control, and child language outcomes together. To explore these relations, we assessed infant distractibility from faces (an index of attentional control) at 12 months via the Multisensory Attention Assessment Protocol (MAAP; Bahrick et al., 2018), a novel, fine-grained measure of attention to audiovisual social and nonsocial events. We also assessed maternal intrusiveness at 12 months and child language outcomes at 18 months. We predicted that greater maternal intrusiveness and greater infant distractibility would predict poorer language outcomes.

Methods

Children (N = 104) participated in an ongoing longitudinal study from 3- to 72-months. *Predictors:* Infant distractibility from faces of people speaking was assessed at 12 months using the MAAP. Each trial of the MAAP begins with a silent 3-second central visual distractor event followed by two lateral social events depicting women speaking (Figure 1). The visual movements of one lateral event are synchronous with its natural soundtrack while those of the other are asynchronous. For half of the trials (distractor trials), the central distractor event remains on during the lateral events. Infant distractibility is measured as the proportion of total looking time to the central event (divided by the looking time to all three events) during these distractor trials. Maternal intrusiveness was assessed at 12 months from a semi-structured free-play interaction in the lab. Examples of intrusiveness included failing to modulate behavior in response to the infant's negative affect or turning away, taking away objects while the infant was engaged, or overstimulating the infant. Trained coders rated maternal intrusiveness on a scale from 1 (no evidence of intrusiveness) to 4 (high level of intrusiveness). *Outcome:* Infant receptive vocabulary at 18 months was assessed using the Mullen Scales of Early Learning (Mullen, 1995).

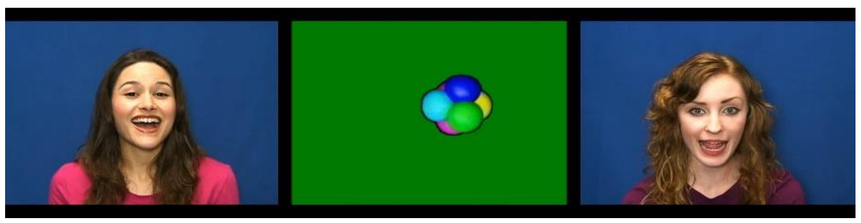

Figure 1. Static images of the dynamic audiovisual social events in the presence of a distractor event from the MAAP.

Results

Correlations revealed that greater maternal intrusiveness at 12 months predicted greater infant distractibility at 12 months, r = .344, p = .008 (Figure 2A), which in turn predicted poorer receptive language at 18 months, r = -.328, p = .032 (Figure 2B). However, maternal intrusiveness did not predict receptive language, p = .11. We next tested a model to characterize potential mediational pathways from our predictors to infant language outcomes (Figure 3). Results indicated that infant distractibility fully mediated the relation between maternal intrusiveness and infant receptive language, p = .01. The indirect effect of maternal intrusiveness on infant receptive language through infant distractibility was significant, b = -3.251, SE =1.200, p = .007. Results from analyses of the indirect effect indicate that maternal intrusiveness significantly effects infant receptive language through infant distractibility.

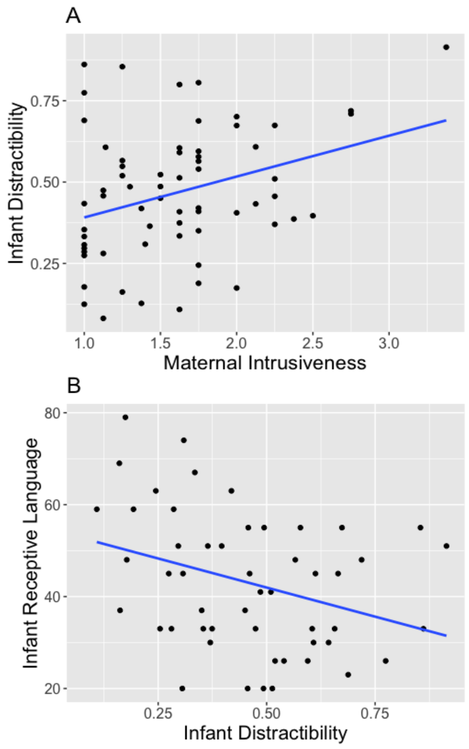

Figure 2. Scatterplots depicting the relations between variables. A: Maternal intrusiveness and infant distractibility. B: Infant distractibility and infant receptive language.

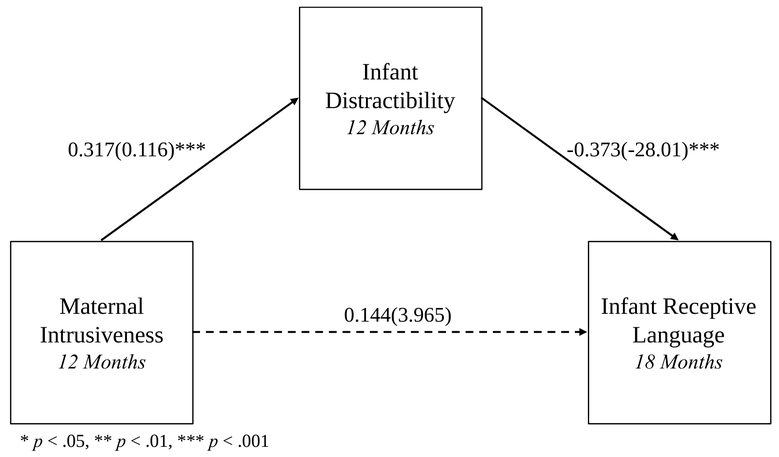

Figure 3. Mediation model depicting relations among maternal intrusiveness, infant distractibility, and infant receptive vocabulary. Standardized path coefficients are presented outside parentheses and unstandardized path coefficients are presented within parentheses.

Conclusions

Findings demonstrate that greater maternal intrusiveness predicts greater infant distractibility, which in turn predicts poorer language outcomes. This suggest that interventions aimed at improving infant attentional control (reducing distractibility, increasing sustained attention) may help to reduce the negative effects of maternal intrusiveness on infant language.

References

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