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The relation between maternal perception of toddler emotion regulation abilities and emotion regulation abilities displayed by children in a frustration inducing task

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Abstract

The present study aims to investigate the association between maternal perception of toddler emotion regulation abilities, measured with the Emotion Regulation Checklist, and emotion regulation abilities displayed by the child in a delay of gratification task. The participants included 30 Romanian toddlers (M age = 22.89 months) along with their mothers. The results indicated that mother’s perception of toddler’s lability was positively associated with observed behavioral aggression, while the mother’s perception of toddler’s emotion regulation was negatively associated with observed behavioral aggression. The results suggest that mothers are more accurate in perceiving the toddler lability.

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1. Introduction

The construct of emotion regulation is grounded in theoretical and empirical work in developmental and clinical psychology (Cole, Martin, & Dennis, 2004; Fox & Calkins, 2003; Sroufe, 2000). Emotion regulation processes can be viewed as “those behaviors, skills, and strategies, whether conscious or unconscious, automatic or effortful, that serve to modulate, inhibit, and enhance emotional experiences and expressions” (Calkins & Hill, 2007).

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An individual’s emotions can be regulated by the individual himself or emotion regulation can occur inside a relationship (e.g., a mother trying to distract a distressed toddler; Cole, Martin & Dennis, 2004).

Studying emotion regulation is relevant since emotion regulation and its typical development has been associated to several child outcomes such as: empathy (Shields & Cicchetti, 1997), school readiness (Ursache et al., 2013), academic achievement (Trentacosta & Izard, 2007) and social competence (Eisenberg, Guthrie, Fabes, Reiser, Murphy, Holgren et al., 1997). In addition, failure in developing appropriate emotion regulation skills may be a precursor to psychopathology (Fox & Calkins, 2003).

The developmental trajectory of emotion regulation could be understood as following: infants have a basic, limited and varying in effectiveness capacity for regulating emotion, later developed via mutual interactions with their mothers, while toddlers learn to control their emotions and behaviors more independently (Kropp, 1989). Emotion regulation constitutes a major developmental task in toddlerhood and the lack of appropriate emotion regulation skills at this age might be a precursor to later behavior problems, yet most of the research in the field is still focused on the later, preschool period (e.g., Cole, Dennis, Smith-Simon & Cohen, 2009; Altan-Aytun, Yagmurlu & Yavuz, 2013; Carlson & Wang, 2007). Given the underlined importance of toddlerhood, we aimed to investigate emotion regulation at this age.

Emotion regulation strategies of used by toddlers for regulating negative emotions could be classified in: 1) strategies that increase/maintain focus on the distress-generating stimuli and attempt to alter the environment; 2) behaviors that shift attention away from the arousing stimuli (distracting activity); 3) behaviors that are centered on comfort or reassurance, either directed at others (e.g., seeking proximity) or directed at oneself (e.g., sucking one’s thumb) (Grolnick, Bridges & Connell, 1996; Gillom et al, 2002). In our study, we looked at emotion regulation strategies that fit into these three main categories, as they were displayed by toddlers in a distress-inducing delay task.

Two aspects of emotion regulation are often delineated: adaptive regulation (the ability to manage an emotional experience), and emotional lability (the sensitivity to emotion-inducing events). Dunsmore et al. (2012) pointed out that these aspects strongly and negatively correlate, though they are not simply opposites. Given that, the assessment of both regulation and lability is justified. In our study, we included a measure of maternal perception of emotion regulation that taps these two aspects, namely the Emotion Regulation Checklist (Shields & Cicchetti, 1997).

Advancing research in the domain of child emotion regulation depends on the way this construct is assessed. One way of doing this assessment is to investigate the relation between results obtained using different methods or informants (Hourigan et al., 2011). Thus, our study examines emotion regulation in a sample of Romanian toddlers using a multi-method multi informant approach. We aimed to outline a tentative specific profile of emotion regulation in this specific population, as well as to investigate how multiple methods of assessing emotion regulation in toddlers might be related.

The central objective of the present study is to examine if maternal perception of toddler emotion regulation abilities is correlated with the emotion regulation abilities displayed by children in a frustration inducing task - delay of gratification - in the laboratory.

2. Method

2.1. Participants

The participants included 30 toddlers, M_{age} = 22.89 months (σ =2.53 months), out of which 17 boys and 13 girls, along with their mothers.

2.2. Emotion Regulation Checklist (ERC)

To assess the child’s emotion regulation, mothers were given the Emotion Regulation Checklist (Shields & Cicchetti, 1997) that consists of 24 items which assess how the parent perceives the child’s typical methods of managing emotional experience. The items are rated on a scale of 1 (never) to 4 (always). The ERC has a Lability/Negativity subscale (inflexibility, lability and dysregulated negative affect) and an Emotion Regulation
subscale (emotional self-awareness, empathy and appropriate/regulated emotional expression). Shields and Cicchetti (1997) have found the reliability coefficient to be high for ERC as a whole but also for the two subscales (0.89 for the whole scale, 0.96 for Lability/Negativity and 0.83 for Emotion Regulation).

2.3. Delay of gratification task

During a lab observation session, we applied a delay of gratification task to evoke the child’s regulation strategies. In this task, we asked the child to wait for a cookie while the mother was filling a questionnaire. Child regulatory attempts were coded in 5-s intervals across the 4-minute delay task in the following categories adapted by Friedlmeier, Corapci, Benga & Kurman, manuscript in preparation: Active Distraction —Child initiated (i.e., Attention is not on the delay object. Child initiates or participates in alternative activities, shifts focus away from treat, begins an alternative behavior); Active Distraction- Child joined (i.e., Child joins in a distractive alternative activity that mother has initiated such that attention is not on the delay object); Orienting to Non-Delay (i.e., Focusing attention on objects other than the cookie, e.g., looking at ceiling, hands); Orienting to Delay (Child focuses on the delay object); Information gathering (i.e., Asking questions aimed at learning more about the prize or waiting situation, but not aimed at changing or ending the waiting period); Physical Comfort Seeking (i.e., Child seeks closeness to mother to be comforted); Child Self-Comfort (i.e., Physically or verbally comforts self; e.g., child hugs or pats self or sucks thumb); Behavioral Aggression (i.e., Banging, venting, kicking, throwing, hitting the task object or aggression directed toward mother or experimenter); Verbal Aggression (Screaming, yelling, screeching); Contact to mother (i.e., These are child-initiated bids to engage mother in the situation).

These strategies were grouped into three main categories, according to literature (as mentioned in the introduction section) (Friedlmeier, Corapci, Benga & Kurman, manuscript in preparation), namely: Focus on delay object (Orienting to Delay Object, Behavioral Aggression, Verbal Aggression), Self Regulation (Orienting to Non delay, Self Comforting, Active Distraction Joined, Active Distraction Initiated) and Interaction with Mom (Physical Comfort Seeking, Information Seeking, Contact to Mother).

For each strategy, a ratio was computed reflecting the number of intervals in which the child used the strategy out of the total number of completed intervals. Information Seeking strategy was dropped from the analysis because in this sample no children showed this strategy. All videos were coded by two independent master students coders. 20% of the data was double coded in order to establish interrater agreement and Cohen Kappas ranged from .68 to 1.

3. Results

First we conducted preliminary one-way repeated measures ANOVA in order to examine whether there are significant differences between different strategies used by the child in the delay of gratification task. There was a notable and significant effect on within subject analysis for the child emotion regulation strategies: F(2,30) = 11.86, $\mu^2 = 0.459, p<0.05$. Further, the post-hoc contrast analysis revealed that children used significantly more Self-Regulation compared with Interaction with Mom strategies F(1,30) = 21.650, $\mu^2 = 0.427, at p< 0.05$ during the delay task. We examined further the relationship between mother’s evaluation of her child’s emotion regulation strategies and the strategies displayed by the child during the delay of gratification task. The bivariate relations among these variables are shown in table 1. The correlations indicated a positive association between maternal perception of child’s Lability and levels of observed Behavioral Aggression manifested by the child during the delay task ($r = .545, p<.01$) and a negative association between maternal perception of child’s Emotion Regulation and observed Behavioral Aggression ($r = -.394, p<.01$). No further significant associations were found. However, there was a marginal significant positive correlation between child’s Lability as perceived by the mother and child’s tendency to manifest Physical Comfort Seeking during the delay task ($r = .368, p=.06$). In addition, mothers rated their daughters as having significantly higher levels of Lability. However, when we looked whether children’s emotion regulation strategies differ during the observational task as a function of gender, no significant interaction was found between the type of strategy used by the child and their gender [ F (2,30) = .13, p > .05].
Table 1. Pearson correlations (N=30) for mothers’ perception of the child emotion regulation abilities, measured through the ERC and the child’s emotion regulation strategies during the laboratory delay of gratification task.

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Lability/ negativity (ERC subscale)</td>
<td>1</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. Emotion regulation (ERC subscale)</td>
<td>-384*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3. Active distraction child initiated</td>
<td>-109</td>
<td>0.79</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Active distraction child joined</td>
<td>-265</td>
<td>0.053</td>
<td>0.060</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>5. Orienting to Non-Delay</td>
<td>-178</td>
<td>-0.030</td>
<td>-0.196</td>
<td>0.217</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6. Orienting to Delay</td>
<td>-155</td>
<td>-0.194</td>
<td>-0.254</td>
<td>-0.099</td>
<td>0.029</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>7. Physical comfort seeking</td>
<td>0.368</td>
<td>0.066</td>
<td>-0.154</td>
<td>-0.186</td>
<td>0.055</td>
<td>-0.184</td>
<td>1</td>
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<tr>
<td>8. Child self-comfort</td>
<td>-0.266</td>
<td>0.028</td>
<td>0.066</td>
<td>0.283</td>
<td>0.320</td>
<td>-0.024</td>
<td>-0.158</td>
<td>1</td>
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</tr>
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<td>9. Behavioral aggression</td>
<td>.545**</td>
<td>-394*</td>
<td>0.054</td>
<td>-0.110</td>
<td>-0.041</td>
<td>-0.291</td>
<td>0.521**</td>
<td>-0.074</td>
<td>1</td>
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<td></td>
</tr>
<tr>
<td>10. Verbal aggression</td>
<td>.340</td>
<td>-0.109</td>
<td>-0.293</td>
<td>-0.194</td>
<td>-0.159</td>
<td>0.280</td>
<td>.481**</td>
<td>-0.143</td>
<td>.181</td>
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</tr>
<tr>
<td>11. Contact to mother</td>
<td>.189</td>
<td>.165</td>
<td>-605**</td>
<td>-0.160</td>
<td>-0.080</td>
<td>-0.430*</td>
<td>.333</td>
<td>-0.131</td>
<td>.115</td>
<td>.146</td>
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<tr>
<td>Gender</td>
<td></td>
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<td>.044</td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01

Table 2. Descriptive statistics for the three main emotion regulation categories (N=30).

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on delay object</td>
<td>.50</td>
<td>.25</td>
</tr>
<tr>
<td>Self-Regulation</td>
<td>.69</td>
<td>.34</td>
</tr>
<tr>
<td>Interaction with Mom</td>
<td>.25</td>
<td>.24</td>
</tr>
</tbody>
</table>

4. Discussion

The major aim of the present investigation was to examine emotion regulation in a sample of Romanian toddlers using a multi-method multi-informant approach. Specifically, we were interested to see whether maternal perception of toddler emotion regulation abilities is associated with the emotion regulation abilities displayed by the child in an emotion evoking task. Several findings relevant to this goal emerged.

First, overall there was a weak and non-significant association between the way mothers perceive their children’s self-regulation abilities and the strategies observed when the children were confronted with a frustration-inducing task. For example, during the delay of gratification task children used significantly more Self-Regulation strategies such as Orienting to Non-Delay, Active Distraction, Self Comforting, etc compared with Interaction with Mom strategies, but this was not associated with higher maternal ratings of Regulation abilities in the child. This result
might be interpreted as evidence that toddlers are able to show self-regulation abilities at a higher degree than it is expected/ perceived by their mothers. Moreover, mothers rated their daughters as having higher levels of Lability, as compared to boys.

Second, the present study revealed that higher levels of toddler’s emotional Lability as perceived by their mothers were associated with greater Behavioral Aggression manifested by the child during the delay task. However, a reversed pattern of association was found between mother’s perception of toddler’s Regulation abilities and Behavioral Aggression. In addition toddlers perceived by their mothers as being high in Lability had a tendency to show more Physical Comfort Seeking during the observational task. These results might indicate that there is a higher degree of agreement between maternal perceptions of toddler’s lability/ negativity and the corresponding observed strategies used by their children, meaning that mothers might be more accurate to perceive their children’s elevated negative emotional response as compared to their children’s abilities to self-regulate. Given that, to our knowledge, this is the first study that has investigated emotion regulation strategies displayed by toddlers using a multi-method informant approach in a Romanian sample, we believe that future replication of this data using larger samples will be essential.

Acknowledgment

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