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INTRODUCTION

The emergence of **self-regulation** can be seen in relation to several constructs which begin to develop at the end of a child's first year. These are: **effortful control** of behaviour (Rothbart & Bates 1998) – a temperamental construct that enables active self-regulation and is linked to **executive attention** (Rueda, Posner & Rothbart 2005) – the ability to manage attention towards some stimulus while ignoring others and resolving conflicts.

As the term **self-regulation** refers to a child's ability to "(1) control the reaction to stress, (2) capacity to maintain focused attention and (3) the capacity to interpret mental states in themselves and others" (Fonagy & Target 2002, p. 307), the **objective of the study** was to explore the relations between **emotion regulation during frustration** and **attention regulation** in twelve-month-old infants.

METHOD

358 children aged 12 months (M=52.39 weeks, SD=1.36; 158 girls, 200 boys) participated in the study, conducted in the Child Development Psychology Laboratory.

Emotion regulation was assessed during a frustration task (**Toy Withdrawal**, see Braungart-Rieker & Stifter 1996).



Children were observed for 30 seconds after toy withdrawal and 30 seconds after the toy was given back to them.

We assessed:

Emotion regulation strategies:

1. Communication
2. Object orientation
3. Social orientation
4. Avoidance
5. Self-soothing

Effectiveness of regulatory processes:

1. Intensity of negative emotions
2. Latency of emotional reaction
3. Stability of emotional reaction

Attention regulation was assessed during three tasks



Playing with parent



Informative pointing understanding



Alternate interaction in ESCS

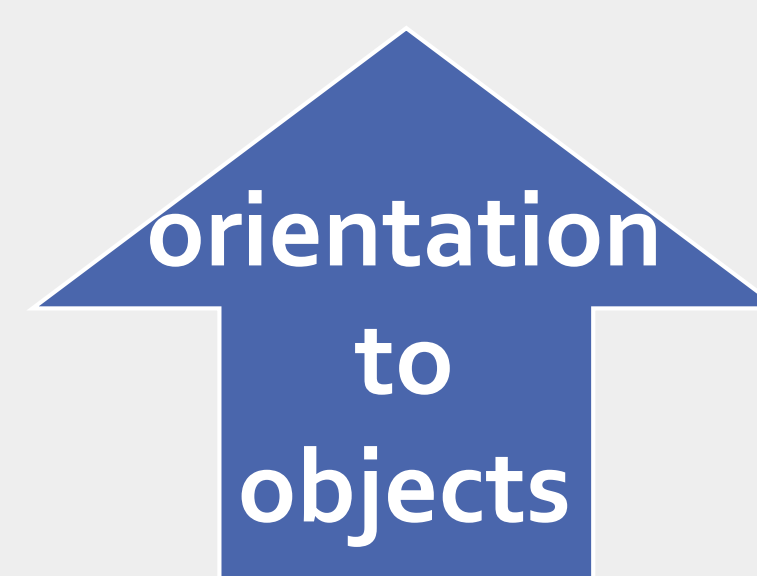
We assessed:

1. Ability to focus on the activity
2. Stability of attention (fluctuation of focus and distraction episodes)

RESULTS

EMOTION REGULATION

All five strategies of emotion regulation were observed. However, their **effectiveness** was different:



Less intensity of negative vocalisation ($F=11.03$, $p<0.001$) and facial expression ($F=10.57$, $p<0.001$); Emotional reaction is **more delayed** ($F=8.34$ and $F=9.18$, $p<0.001$).



Emotional reaction is **more persistent** ($F=3.44$, $p=0.017$)

EMOTION – ATTENTION REGULATION

better attention focus

$r = -.23$

less intensity of emotional reaction

better attention focus

$r = .21$

more delayed emotional reaction

greater stability of attention

$r = -.14$

less intensity of emotional reaction

greater stability of attention

$r = .12$

more delayed emotional reaction

All correlation coefficients are significant at least at $p < 0.05$

DISCUSSION

The results show a correlation between the ability to focus attention and emotional regulation in infancy, although the correlation coefficients are rather weak. The possible explanation for this relationship could be **through emotion-regulation strategies** – children who can better regulate their attention are more able to focus on some other object during frustration – and this strategy seems to be the most effective in regulating infants' emotions.

However, another moderator of the relation observed can be **emotional reactivity** – a temperamental construct linked to the intensity and latency of emotional responses (Rothbart & Bates 1998). It seems possible that less reactive children can focus attention more easily as they do not have to deal with their own emotions. This possibility still needs to be addressed.

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