Cognitive biases in parents of child displaying externalizing behaviors

Galdiolo, S., Jacobs, E., Philippot, P., Rossignol, M., & Roskam, I.

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Child's externalizing behaviors (EB)

- = Agitation, aggressive, oppositional, or noncompliant behaviors (Bagner et al., 2012)

- Concern many preschool children

- Risk that early EB lead to more severe and persistent EB in childhood and adolescence (Deater-Deckard, 2004)
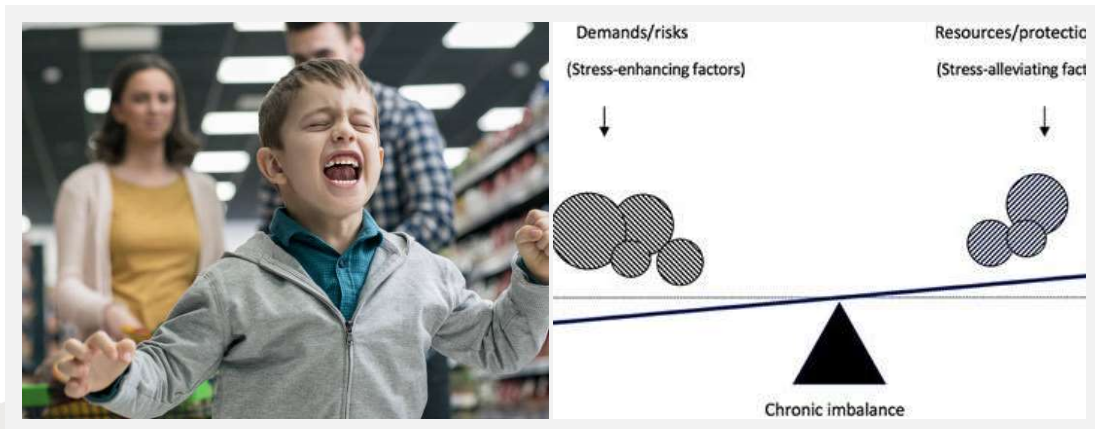
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When parents cope with child's externalizing behaviors

Être parent, c'est savoir faire preuve de stratégie

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Parent – Child Relationship Model (Abidin, 1990)

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Child's EB & parental stress

- Positive associations – cross-sectionally & longitudinally (Stone et al., 2015)

- Child-driven effects in eliciting changes in parents' psychological stress (Yan et al., 2020)

  - With cumulative and cascading effects → child's own developmental trajectory (Masten & Cicchetti, 2010)

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Child's externalizing behavior as a relational threat
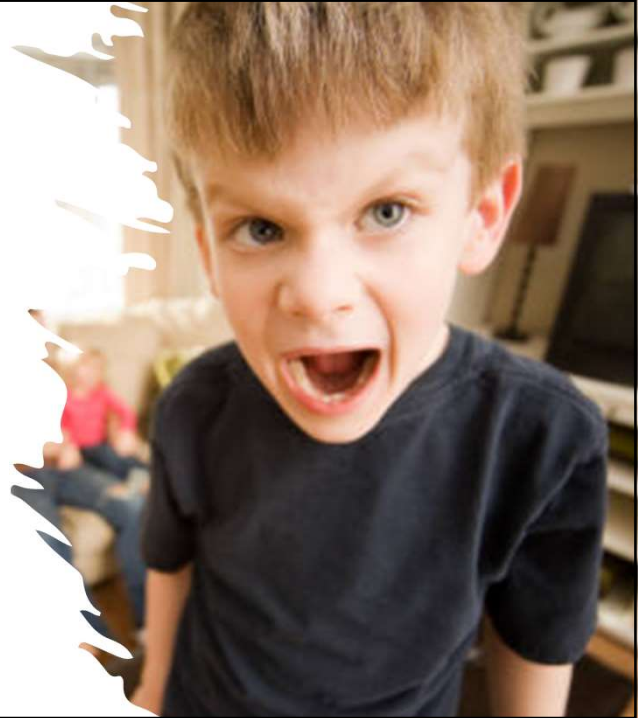
- Parental cognitions
  - Parent-causal or child-responsible attributions for explaining child's behaviors (Kil et al., 2021)
  - Early development of a generalized schema or expectations about the child's behaviors (Brunk & Henggeler, 1984)
  - Parent's overestimation of the dysfunctional behaviors in child with EB (Manti et al., 2019)

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Question 1: Cognitive biases in parents' of child with externalizing behaviors?

- Cognitive biases

  - = Dysregulation in parents' preferential allocation of attention and/or memory recall towards their child's negative behaviors or emotions rather than neutral or positive ones

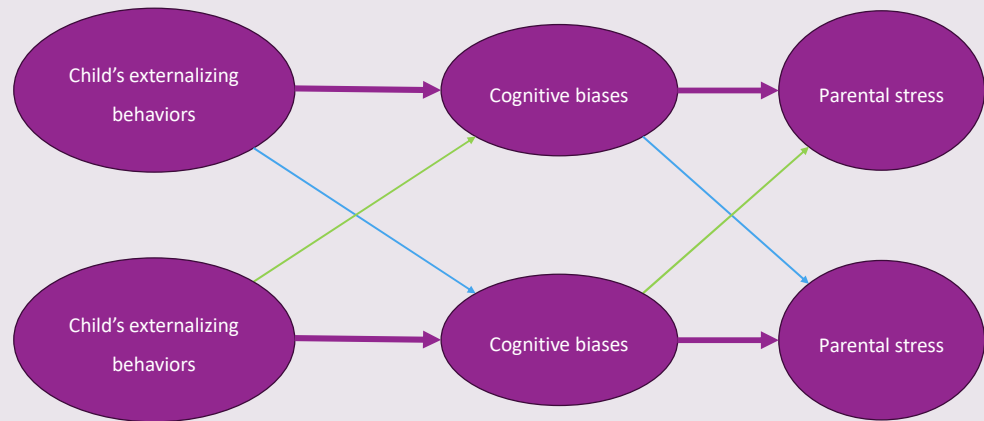 - Frequently studied with an intraindividual perspective (e.g., anxiety)

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Question 2: Cognitive biases as mediators in child's externalizing behaviors – parental stress?

Child's externalizing behaviors → Parents' cognitive biases → Parental stress
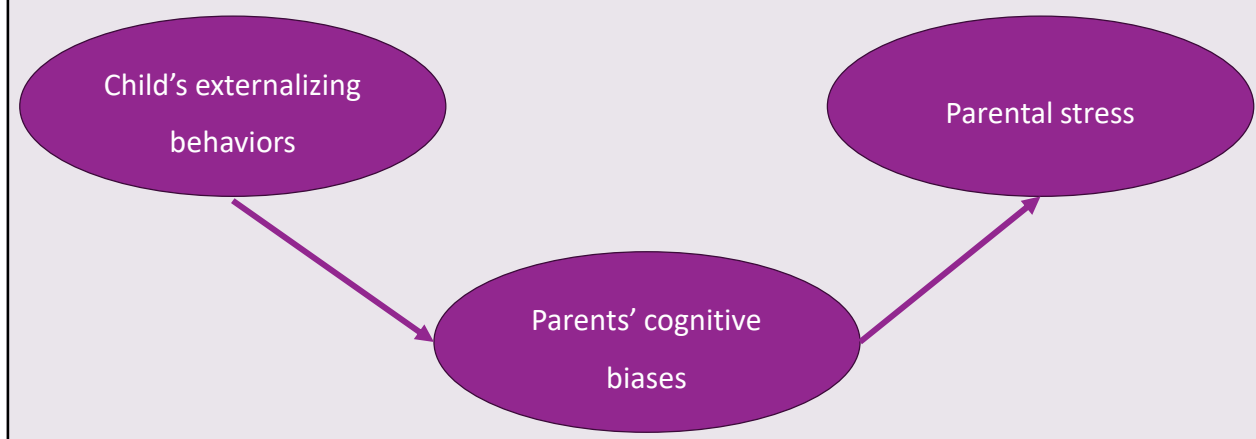
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Question 3: Mother – Father mediation analyses (APIMeM)?

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43 heterosexual parental couples		
Parent's age	23 – 48 years old (M = 34.63, SD = 4.16)
Child's age	30 – 80 months old (M = 51.84, SD = 13.83) ~ 3 – 6 years old
21% of the children regularly consult a psychologist	
20% of the parents have no higher school diploma	

Participants

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Measures

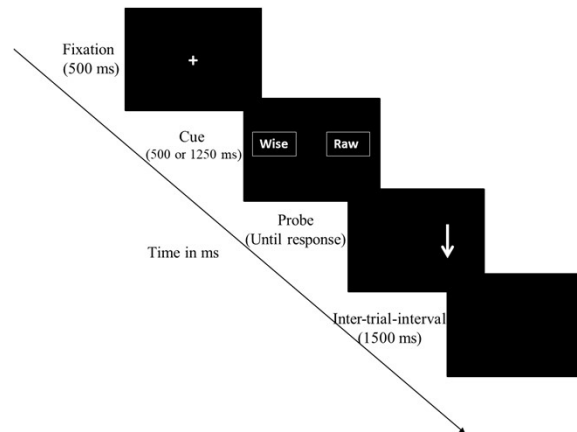|	
Child externalizing behaviors	Child Behavior Check-List (CBCL; Achenbach, 2010) « externalizing behavior » scale (α = .91; 32 items; 3-point Likert scale) 14% of the children were in the clinical or borderline range
Parental Stress	Parental Stress Scale (PSS; Berry & Jones, 1995) (α = .80; 13 items; 5-point Likert scale)
Attentional bias	Visual Probe Task (Jones et al., 2018; McLeod et al., 1986)

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Visual Probe Task (Pictures)

- Central fixation cross (500 ms)
- Cue (500 or 1250 ms)
  - Attentional bias for short-duration negative cues: Early processes involved in initial visual orienting
  - For long-duration: Later strategic processes involved in maintenance of attention or avoidance
- Probe

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Visual Probe Task (Words)

- Central fixation cross (500 ms)

- Cue (500 or 1250 ms)
  - Attentional bias for short-duration negative cues: Early processes involved in initial visual orienting
  - For long-duration: Later strategic processes involved in maintenance of attention or avoidance

- Probe

Fixation (500 ms)

Cue (500 or 1250 ms)   Wise   Raw

Probe (Until response)

Time in ms

Inter-trial-interval (1500 ms)

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Measures

| Child externalizing behaviors	Child Behavior Check-List (CBCL; Achenbach, 2010) « externalizing behavior » scale (α = .91; 32 items; 3-point Likert scale) 14% of the children were in the clinical or borderline range
Parental Stress	Parental Stress Scale (PSS; Berry & Jones, 1995) (α = .80; 13 items; 5-point Likert scale)
Attentional bias	Visual Probe Task (Jones et al., 2018; McLeod et al., 1986)
Memory bias	Incidental Recall Task (Gotlib et al., 2004)

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Incidental Recall Task

- Central fixation cross (500 ms)

- Describe him or her? (500 ms)

- ADJECTIVES
  - E.g., quiet, nervous, wise, etc.
  - Does it describe their child or not?

- After the task, distracter task (Digit-symbol copying task-WAIS) (3 min.)
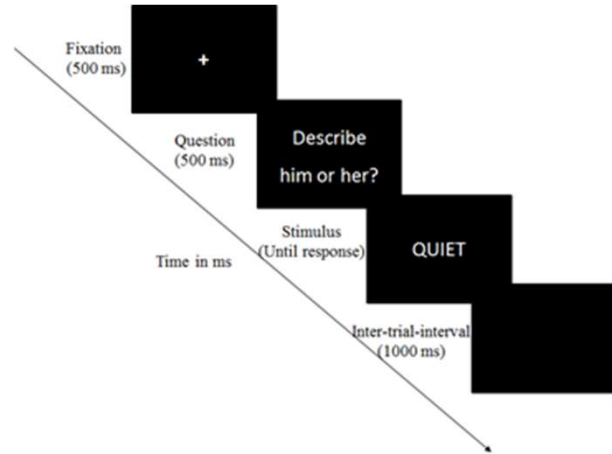
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Incidental Recall Task

- Information-processing bias
  - **Reaction time** = Mean latency to make a decision for the positive vs. negative adjectives
  - **Incidental recall scores**
    - (Adjectives originally endorsed + subsequently recalled) / Total words endorsed and recalled
    - For positive and negative content
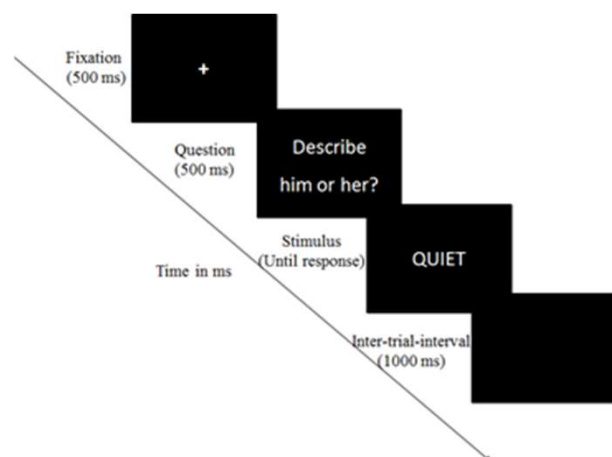
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Design

Time 0	T0 + 1 week	T0 + 2 weeks
CBCL	EMBCF + VPT + IRT	PSS
On line	*Lab*	*On line*

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Results - Correlations

	1	2	3	4	5	6	7
1. CBCL	-	-	-	-	-	-	-
2. PSS	0.65***	-	-	-	-	-	-
3. AB (words; 500 ms)	0.18	0.12	-	-	-	-	-
4. AB (words; 1250 ms)	0.03	0.11	-0.02	-	-	-	-
5. AB (pictures; 500 ms)	0.04	-0.18	0.21*	0.11	-	-	-
6. AB (pictures; 1250 ms)	0.09	0.03	0.04	0.02	0.32**	-	-
7. MB – reaction time	-0.26*	-0.29**	0.08	-0.02	0.45***	0.01	-
8. MB - iRT	0.66***	0.62***	-0.03	-0.02	0.15	-0.03	-0.36***

*$p < .05$; **$p < .01$; ***$p < .001$

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Mediation analysis

	Coefficient	S.D.	T-value	LLCI	ULCI
1	0.22**	0.02	9.79	0.18	0.27
2	1.51*	0.52	2.89	0.47	2.55
3	0.62**	0.16	3.86	0.30	0.94
Indirect effect	0.23	0.08		0.05	0.38

*p < .05; **p < .001
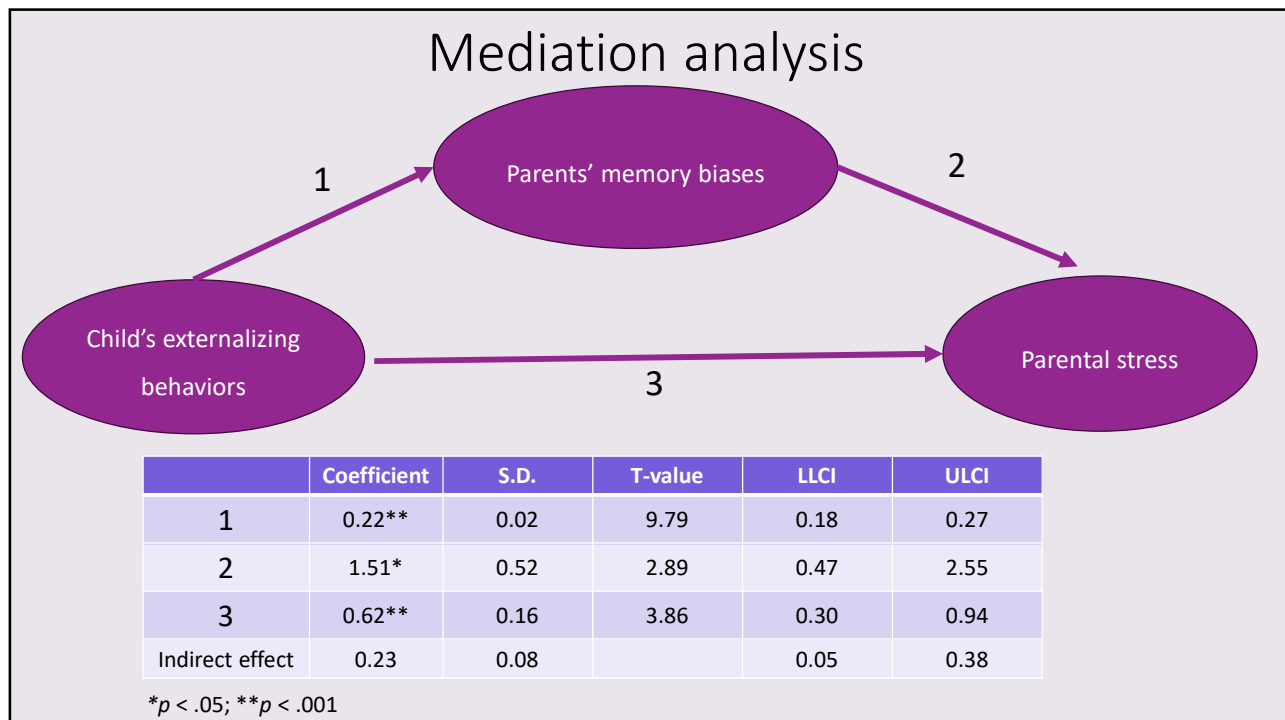
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Results – Dyadic correlations

	1	2	3	4	5
1. CBCL – father	-	-	-	-	-
2. CBCL – mother	0.78*	-	-	-	-
3. PSS – father	0.70*	0.62*	-	-	-
4. PSS – mother	0.67*	0.68*	0.58*	-	-
5. MB – father	0.77*	0.68*	0.71*	0.62*	-
6. MB – mother	0.78*	0.63*	0.57*	0.62*	0.67*

*p < .001

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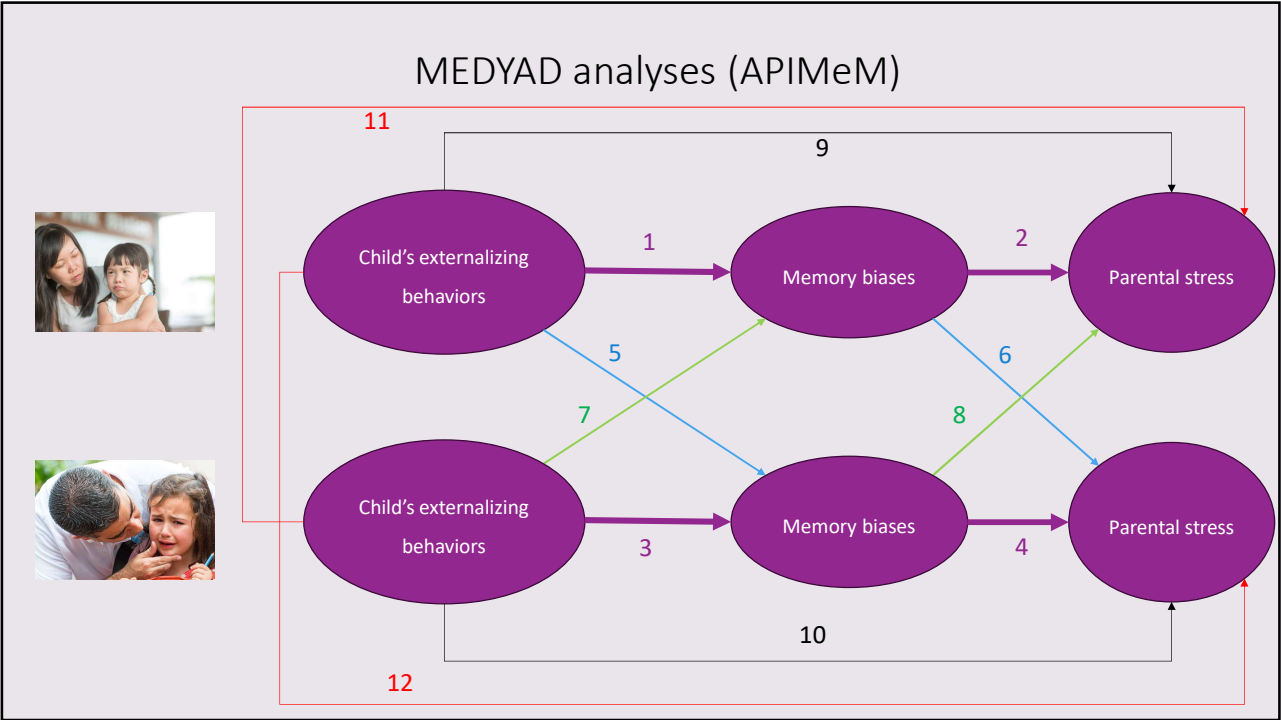
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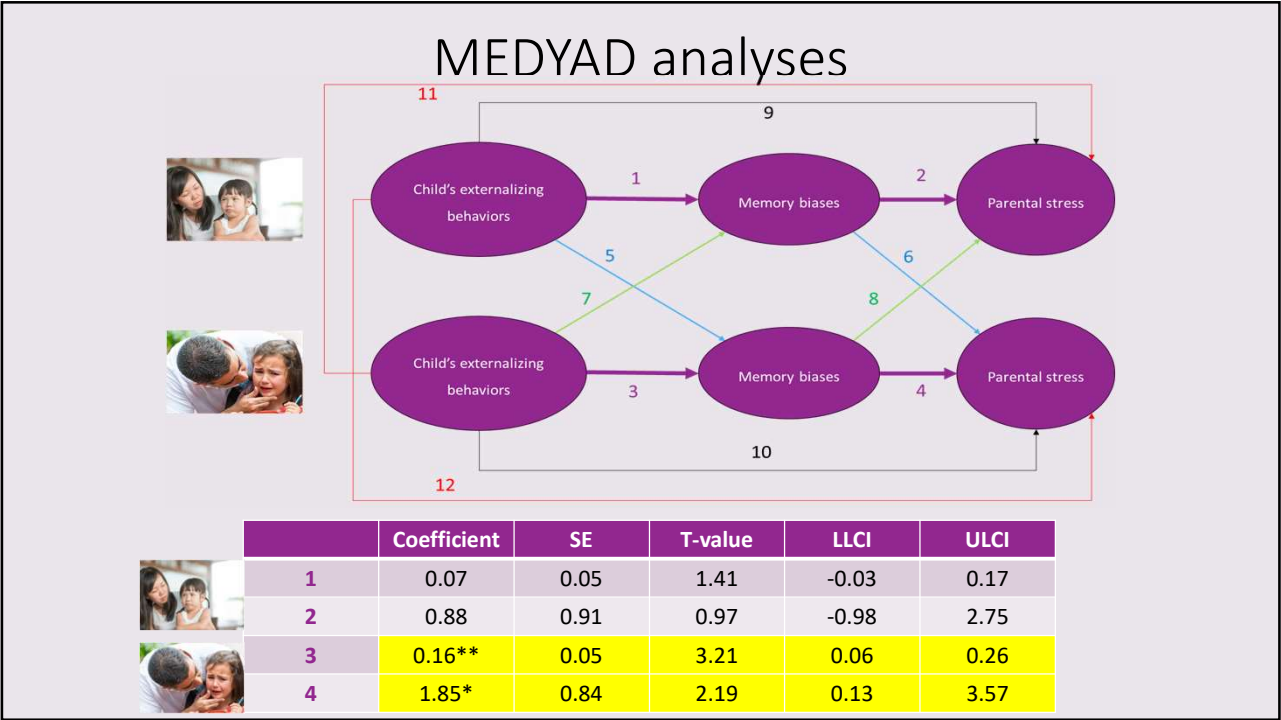
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MEDYAD analyses
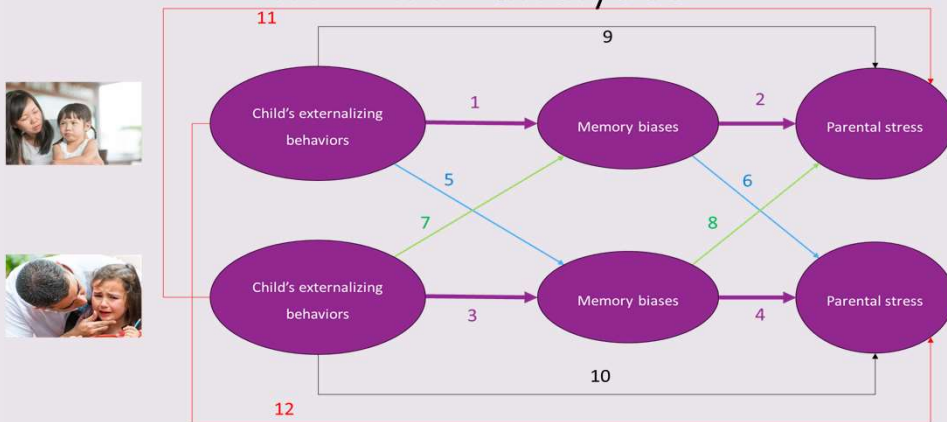
	Coefficient	SE	T-value	LLCI	ULCI
9	0.43	0.30	1.48	-0.16	1.03
10	0.80*	0.33	2.44	0.13	1.47
11	0.16	0.34	0.47	-0.53	0.86
12	0.09	0.28	0.33	-0.48	0.67

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MEDYAD analyses
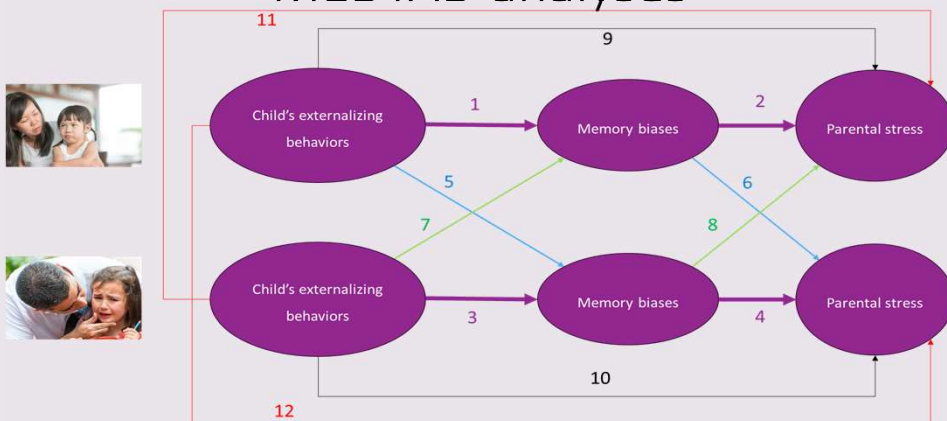
	Coefficient	SE	T-value	LLCI	ULCI
5	0.10	0.05	1.86	-0.01	0.20
6	-0.93	0.88	-1.06	-2.73	0.85
7	0.20***	0.05	4.30	0.11	0.30
8	0.51	0.88	0.58	-1.28	2.29

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MEDYAD analyses – To resume

Child's externalizing behaviors → Memory biases → Parental stress

Child's externalizing behaviors → Memory biases → Parental stress
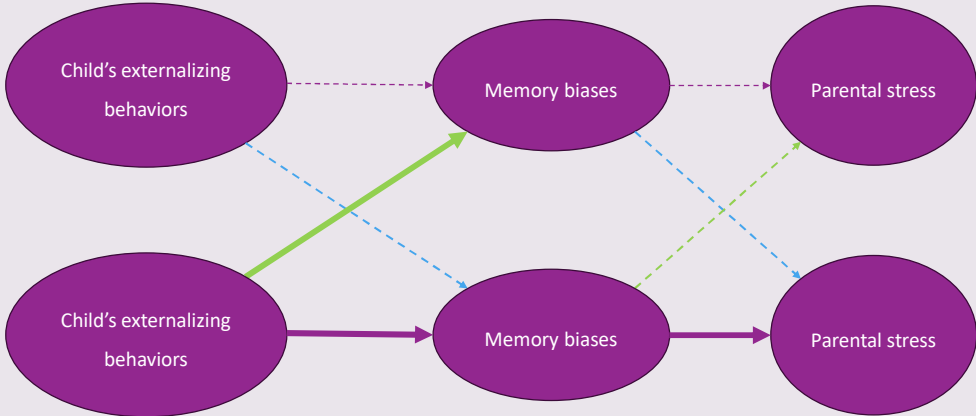
	Coefficient	S.D.	LLCI	ULCI
Indirect effect	0.29	0.16	0.01	0.64

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Discussion

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Demands/risks
(Stress-enhancing factors)

Resources/protectio
(Stress-alleviating fact

Chronic imbalance
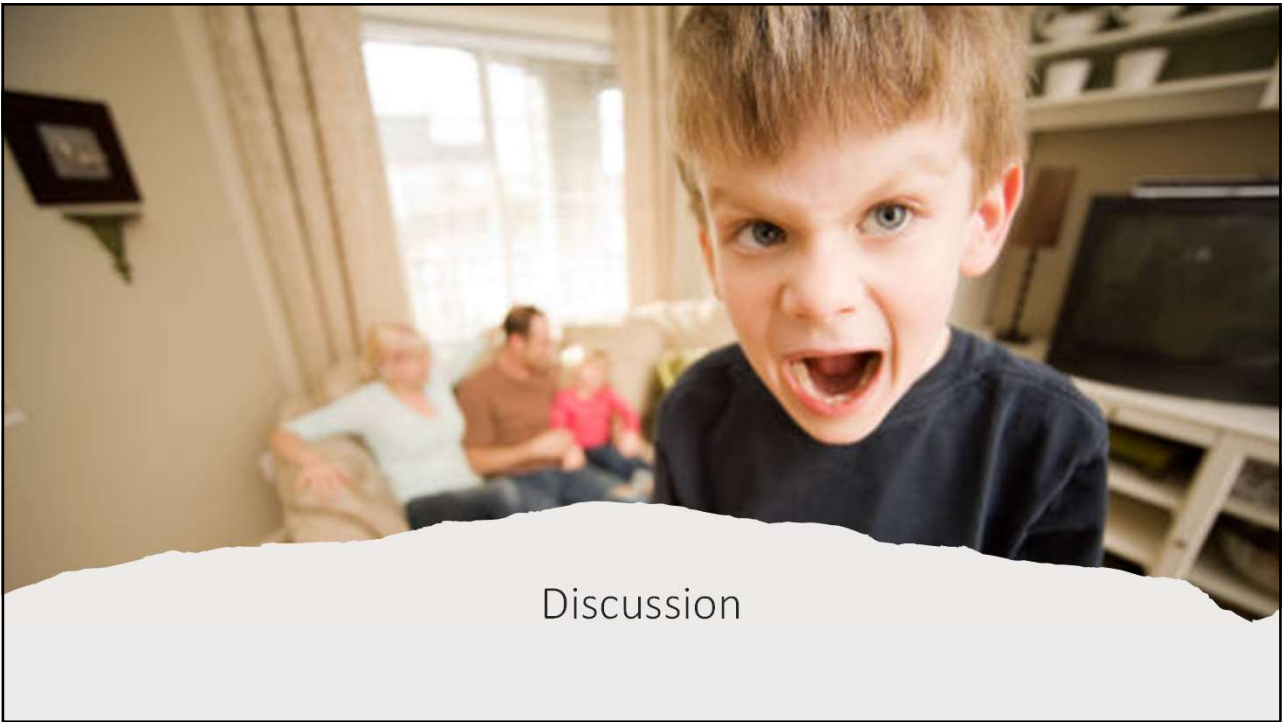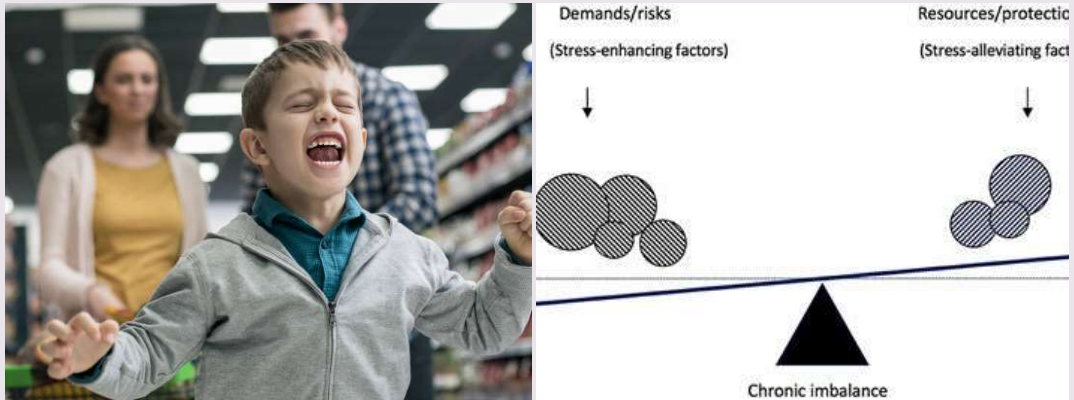
In line with the Parent – Child Relationship Model (Abidin, 1990)

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Question 1:
Parent's attentional vs. memory bias?

Operate automatically at the early stage
of information processing

Occur at the later stages of processing
Elaborative & reflective thinking

(Leung et al., 2022)

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Question 1: Memory bias in parents of child with EB

Occur at the later stages of processing

Elaborative & reflective thinking

→ Activation of stable schemas on
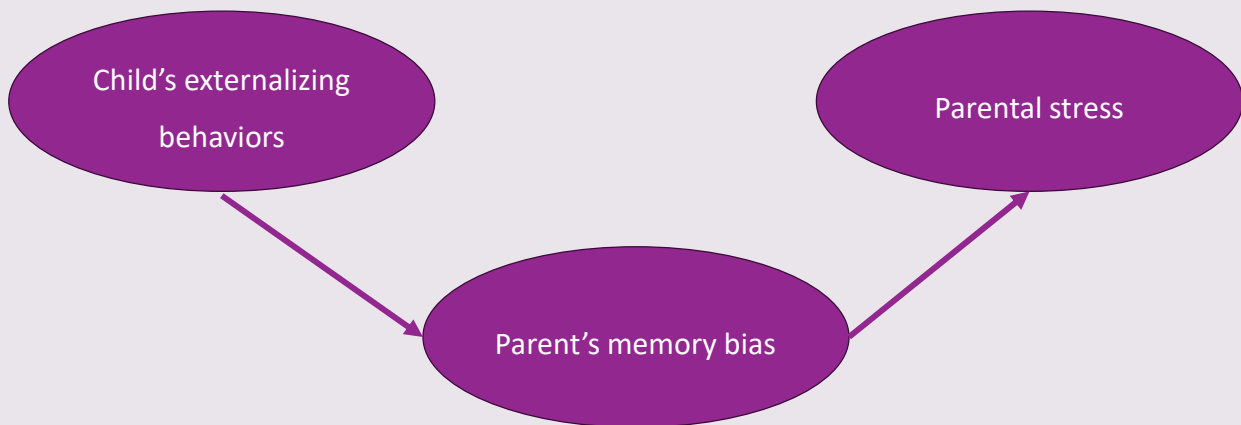
child's functioning

→ A memory may be more accessible

because the cognitive representation easily comes to mind

or fits with expectations (e.g., "he always shouts when he's upset").
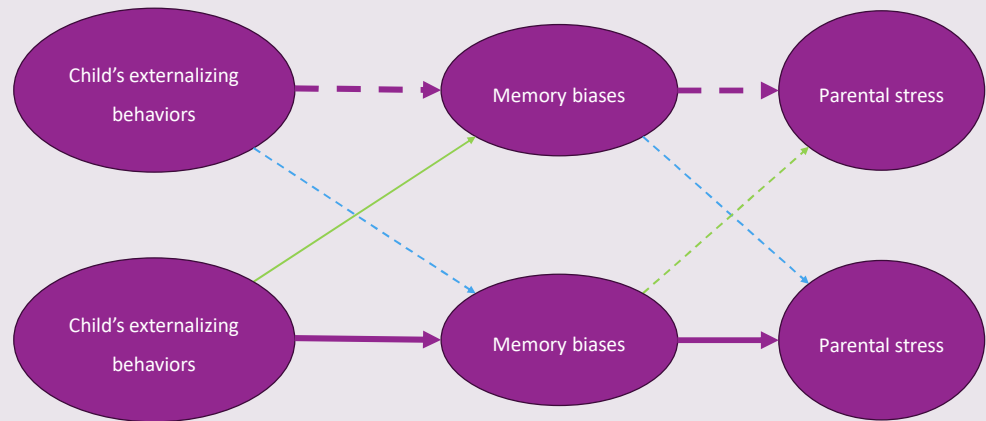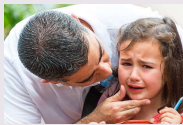
(Leung et al., 2022)

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Question 2:
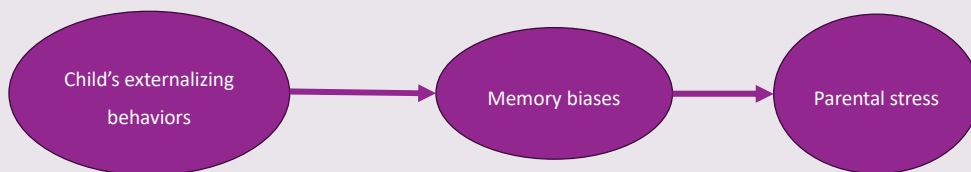## Memory bias as a mediator in child's EB – parental stress

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Question 3:
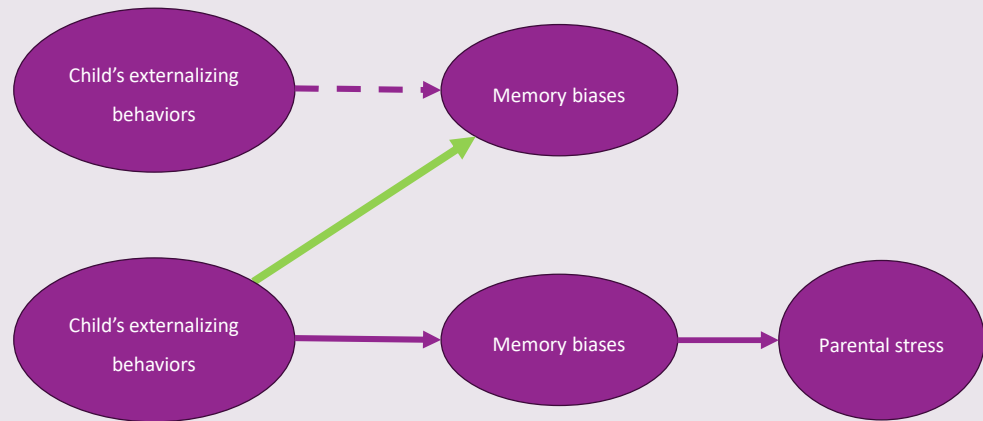## No mother – father interdependence mediation

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Question 3:
Significant father's path mediation

Father's vulnerability, in relation with gender socialization process

(Roskam & Mikolajczak, 2020; Saling & Phillips, 2007)

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Question 3:
Evaluation of child's EB by father & mother's memory bias

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Limitations

Interpretation bias

Sample size

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Thank you!!!

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