Fading Affect Bias and Child Physical Abuse Risk

Introduction

- Fading Affect Bias (FAB):
  - The intensity of affect associated with a recalled event generally decreases over time, but this affective fading is greater for negative events than for positive events.
Individual differences in FAB

- A few studies have examined individual differences in FAB.
- Walker et al. found that FAB was diminished among individuals with higher levels of dysphoric symptoms.

Given that CPA risk is associated with higher levels of negative affect, it is possible that the FAB might be diminished among high CPA risk parents.

- Less fading of negative affect associated with memories involving one’s children might explain CPA risk group differences in negative thoughts/feelings towards children.
Study 1: Hypotheses

- **Hypothesis 1**: The intensity of affect associated with recalled events will decreased over time; however, the affective fading will be greater for negative events than for positive events (FAB replication).

- **Hypothesis 2**: High, compared to low, CPA risk parents will experience less fading of negative affect over time.
Study 1: Methods

- Screened 152 general population parents
  - 90 parents could be reliably classified for CPA risk
    - 52 low CPA risk
    - 38 high CPA risk

- Child Abuse Potential Inventory (Milner, 1986)
  - Used to classify parents as low/high CPA risk
    - Low risk: valid protocol with Abuse score < 166
    - High risk: Abuse score \( \geq 166 \) and not faking bad/randomly responding

Study 1: Methods

- Modified Memory Questionnaire
  - Write a brief description of a positive/negative memory involving one’s child(ren)
    - 3 positive memories/3 negative memories
  - Rate how positive/negative the event made you feel at the time it happened
  - Rate how positive/negative the event makes you feel now as you recall it
Study 1: Methods

- Memory Questionnaire – affect ratings
  - Affect ratings were made on a 6-point scale that ranged from 1 (very negative) to 6 (very positive).
  - Affect ratings for negative events were recoded so that higher scores represented higher levels of negative feelings.

- 2 (Valence) x 2 (Time) x 2 (CAP risk) ANCOVA
  - With annual household income as covariate
  - Valence x Time x CPA risk: $F(1, 88) = 5.47, p = .022, h_p^2 = .059$
Study 1: Results

Positive Child Memories
Mean Affect Ratings

Negative Child Memories
Mean Affect Ratings

- As expected, the FAB effect was weaker in high-risk, compared to low risk, parents when recalling events involving their children.

- It remains unclear whether this CPA-risk moderation effect is specific to memories involving children – or if it represents a generally weaker FAB effect among high (compared to low) risk parents.
Study 2
FAB and CPA risk –
general memories

Study 2 – Introduction

- Purpose: To examine whether the CPA risk moderation of the FAB effect (as observed in Study 1) generalizes to general memories (i.e., events not limited to involving one’s children).
- With one exception, the methods in Study 2 were the same as in Study 1.
  - The exception: the prompts on the memory questionnaire did not instruct parents to focus their recall on events involving their children.
Study 2: Methods (con’t)

- Memory questionnaire prompted for any memories (not limited to child memories)
  - 3 positive events/3 negative events

- Child Abuse Potential (CAP) Inventory
  - High/low risk based on 166 split

- 154 general population parents were screened
  - 90 parents could be reliably classified for CAP risk
    - 57 low CPA risk
    - 33 high CPA risk

- 2 (Valence) x 2 (Time) x 2 (CAP risk) ACNOVA
  - With annual household income as covariate
  - Valence x Time x CPA risk:
    - $F(1, 88) = 0.02, p = .888, h_p^2 = .000$
  - Valence x Time (FAB effect):
    - $F(1, 88) = 20.15, p < .001, h_p^2 = .186$

Study 2: Results
### Study 2: Results

**Positive General Memories**

Mean Affect Ratings

- **Time effect**: $F(1, 88) = 18.11, p < .001, h^2_p = .171$
- **Time x CPA risk effect**: $F(1, 88) = 0.04, p = .837, h^2_p = .000$
- **CPA risk effect**: $F(1, 88) = 0.00, p = .997, h^2_p = .000$

**Negative General Memories**

Mean Affect Ratings

- **Time effect**: $F(1, 88) = 47.75, p < .001, h^2_p = .352$
- **Time x CPA risk effect**: $F(1, 88) = 0.004, p = .951, h^2_p = .000$
- **CPA risk effect**: $F(1, 88) = 0.64, p = .426, h^2_p = .007$

### Study 2: Discussion

- **In summary,**
  - Study 1 revealed that the fading of negative affect associated with memories involving one’s children was smaller in high (relative to low) CPA risk parents.
  - Study 2 revealed that the CPA risk moderation of the FAB effect was not evident for general memories.
  - Collectively, results suggest that the CPA risk moderation of the FAB may be specific to child-related memories.
Study 2: Limitations

- However, given that Study 1 and Study 2 were conducted in two separate samples, it is possible that differences between the samples may have resulted in the divergent findings.

- Additional research manipulating memory type (child-related vs. general memory) within the same sample is needed.

Study 3
FAB and CPA risk - within subjects manipulation of memory type
Study 3: Introduction

- Study 3 was designed to replicate the findings of Studies 1 and 2 using a within subjects design.

- High risk and low risk parents were asked to respond to memory prompts for:
  - Half child–related events, half general events
  - Half positive, half negative

Study 3: Hypotheses

- **Hypothesis 1**: When recalling events involving their children, the magnitude of the FAB effect will be smaller in high CPA risk parents compared to low CPA risk parents.

- **Hypothesis 2**: When recalling general events (not restricted to child–related events), high CPA risk parents will not differ from low CPA risk parents in the size of the FAB effect.

- **Research questions**: Does order of presentation of the child/adult events or positive/negative events moderate the above hypotheses?
Study 3: Methods

- Memory Questionnaire
  - Write a brief description of a positive/negative memory
  - Rate how positive/negative the event made you feel at the time it happened
  - Rate how positive/negative the event makes you feel now when you recall it
  - Affect ratings were made on a 6-point scale that ranged from 1 (very negative) to 6 (very positive).
  - Affect ratings for negative events were recoded so that higher scores represented higher levels of negative feelings

- Participants responded to 8 memory prompts
  - 4 child–related memories (2 positive, 2 negative)
  - 4 general memories (2 positive, 2 negative)

- Order of presentation of the memory prompts was counter balanced such that:
  - Half of the participants were asked to recall child–related memories before general memories (and vice versa)
  - Half of participants were asked to recall positive memories before negative memories (and vice versa).
Study 3: Methods (con’t)

- Child Abuse Potential (CAP) Inventory
  - Used to classify parents as low/high CPA risk
  - Low risk = valid protocol with Abuse score < 166
  - High risk = Abuse score ≥ 166 and not faking bad/randomly responding

- 275 general population parents were screened
  - 172 could be reliably classified for CPA risk
    - 98 low CPA risk
    - 74 high CPA risk

Study 3: Analytic Strategy

- 6-way analysis of variance (ANOVA) model:
  - 2 (Valence: positive, negative)
  - x 2 (Time: occurrence, recall)
  - x 2 (Type: child, general)
  - x 2 (CPA risk: low, high)
  - x 2 (Order type: child first, general first)
  - x 2 (Order valence: positive first, negative first)
Study 3: Results

- 6-way interaction
  - 2 (Valence) x 2 (Time) x 2 (Memory type) x 2 (CAP risk) x 2 (order type) x 2 (order valence):
    - $F(1, 164) = 0.01, p = .926, h_p^2 = .007$

- 5-way interaction – order of memory type
  - 2 (Valence) x 2 (Time) x 2 (Memory type) x 2 (CAP risk) x 2 (order type):
    - $F(1, 164) = 0.42, p = .516, h_p^2 = .003$

- 5-way interaction – order of valence
  - 2 (Valence) x 2 (Time) x 2 (Memory type) x 2 (CAP risk) x 2 (order valence):
    - $F(1, 164) = 7.45, p = .007, h_p^2 = .043$

Study 3: Results

- When negative memories reported first:
  - Valence x Time x Type x CPA risk:
    - $F(1, 80) = 5.36, p = .023, h_p^2 = .059$
  - Follow-up within memory type:
    - Child memories:
      - Valence x Time x CPA risk:
        - $F(1, 81) = 4.14, p = .045, h_p^2 = .049$
      - replicates Study 1 findings
Study 3: Results

When negative memories recalled first:

- Follow up within memory type (continued):
  - General memories:
    - Valence x Time x CPA risk:
      - $F(1, 81) = 0.75$, $p = .388$, $h_p^2 = .009$
    - Valence x Time
      - $F(1, 81) = 48.23$, $p < .001$, $h_p^2 = .359$
      - replicates Study 2 findings
Study 3: Results

When negative memories recalled first:

- Positive General Memories
  - Mean Affect Ratings

- Negative General Memories
  - Mean Affect Ratings

- Time, $F(1, 87) = 0.52, p = .471, h_p^2 = .006$
- Time x CPA risk, $F(1,87) = 6.25, p = .014, h_p^2 = .067$
- CPA risk effect, $F(1, 87) = 4.72, p = .032, h_p^2 = .052$

- Time, $F(1, 87) = 60.99, p < .001, h_p^2 = .412$
- Time x CPA risk, $F(1,87) = 0.35, p = .554, h_p^2 = .004$
- CPA risk effect, $F(1, 87) = 0.32, p = .572, h_p^2 = .004$

Study 3: Results

- When positive memories reported first:
  - Valence x Time x Type x CPA risk:
    - $F(1, 88) = 2.50, p = .117, h_p^2 = .028$
  - For those that are curious:
    - Child related memories
      - $F(1, 88) = 0.43, p = .514, h_p^2 = .005$
    - General memories
      - $F(1, 88) = 2.24, p = .138, h_p^2 = .025$
Discussion

So does CPA risk moderate the FAB effect?

- Study 1:
  - Yes – when parents are recalling child-related events.

- Study 2:
  - No – when parents are recalling general events.

- Study 3:
  - Maybe – when parents are recalling child-related events and they are asked to think about negative events before positive events.

  - Now what???

Discussion

Why would the order of recall for positive/negative events matter?

- High risk parents tend to experience more negative affect and interpret social information as more negative than low risk parents.
  
  - This tendency may be enhance when parents are asked to focus on negative events first.

  - In contrast, asking parents to start by recalling positive events may disrupt this “negativity” bias.
Limitations

- The extent to which this pattern of findings generalizes to substantiated child physical abusers remains unknown.
- It is possible that different patterns of fading may be observed if we asked about more specific forms of negative affect (e.g., anger).
- Additional research is needed to examine how affect fades following perceived child misbehaviors (as opposed to generally negative child-related events).

Future Directions

- What would you do next???
Study 3: Results

When positive memories were recalled first...

Positive General Memories
Mean Affect Ratings

Time x Valence, $F(1,88) = 0.xx$, $p = .xxx$, $h^2 = .xxx$

Study 3: Results

When negative memories recalled first...

Positive General Memories
Mean Affect Ratings

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Time x CPA risk, $F(1,87) = 6.25$, $p = .014$, $h^2 = .067$
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Negative General Memories
Mean Affect Ratings

Time, $F(1, 87) = 60.99$, $p < .001$, $h^2 = .412$
Time x CPA risk, $F(1,87) = 0.35$, $p = .554$, $h^2 = .004$
CPA risk effect, $F(1, 87) = 0.32$, $p = .572$, $h^2 = .004$
Study 3: Results

When positive memories were recalled first:

**Positive Child-related Memories**

Mean Affect Ratings

**Negative General Memories**

Mean Affect Ratings

Time x Valence, $F(1, 88) = 0.xxx$, $p = .xxx$, $h^2_p = .xxx$

Time x Valence, $F(1, 88) = 0.xxx$, $p = .xxx$, $h^2_p = .xxx$