Attentional variability and memory bias in subclinical post-traumatic stress disorder.

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1. Introduction

- Almost 20% of individuals confronted to a traumatic event will maintain post-traumatic stress symptoms (PTSS), which are included into PTSD diagnosis.
- Attentional Biases (AB) and Memory Biases (MB) seem to be a key factor for the maintenance of PTSS.
- AB variability (ABV), which is defined as an oscillation between AB toward and away threatening information underneath, seem to characterize PTSS.
- AB control (AC) could be the responsible for the development of PTSS and/or ABV.

2. Hypotheses

- ABV might occur in greater rates in high PTSS group for later stages of information processing.
- Retrieval mechanisms would be less elaborated in high PTSS group.
- In low AC scores, PTSS would be higher and retrieval mechanisms poorer.

3. Methodology

**Spatial attention task : Dot-probe paradigm**
- Images:
  - 40 negative general - NG (spider);
  - 40 trauma-related - TR (physical assault);
  - 40 positive - P (cats);
  - 3 pairs: P-TR / P-NG / TR-NG.
- ABV
  - Split the dot-probe trials on 18 bins of 20 trials and calculate the AB scores for each bin;
  - Calculate the standard deviation (SD) across bins;
  - Divide the SD by the mean reaction time;
  - An ABV index is obtain, which reflects the stability of AB across the task.

**Recognition task : remember/know paradigm**
- Distractors:
  - N = 60
- Originals:
  - N = 60
- Remember/know paradigm:
  - "Know": poorly elaborated retrieval mechanism (RM);
  - "Remember": elaborated RM depending on internal or external cues.

4. Results

**Dot-probe paradigm**
- Group*ABV in 500ms presentation time (H(9,18), p < 0.010)

**Remember / know paradigm**
- PCL-5 correlated with elaborated RM;
- Arousal correlated with poor RM;
- In PTSS –: PCL-B elaborated RM & AC correlated with elaborated RM;
- In PSTT +: AC correlated with elaborated RM.
- Poorer AC predicted higher PLC-5;
- High ABV-150 was predicted by poorer R/K internal cueing;
- Greater R/K internal cueing was predicted by high AC scores;
- High PCL-5 predicted increased ABV-500;

5. Discussion

- Later ABV linked to PTSS and early ABV linked to MB; No distinction of negative general and trauma-related; Control also presented later ABV: role of depression?
- PTSS might play a protective role in low PTSS for MB; Arousal symptom could be a risk factor to the development of MB.
- Low AC was linked to increased AVB, PCL scores and poorer RM AC mediator for post-traumatic symptomatology?
- Generalization of trauma
- Evidences for the interest therapy on AC, early therapy on ABV and arousal
- QUID role of peritraumatic dissociations in this pattern?

References