Attachment Style's Influence on Cognitive Tasks Performance

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Introduction

- Attachment style is the way people think, feel, and behave in their close relationships (Gillath et al., 2016).
- People with different attachment styles use different attentional strategies and hence perform differently on cognitive tasks involving attachment-related info. (e.g., Edelstein et al., 2005).
- Previous research provides evidence that attachment predicts performance on non-attachment-related tasks.
- Individuals high on avoidant attachment performed better on non-attachment related attention tasks, mainly due to the ability to suppress potential distractors (Gillath et al., 2009).
- The current study aims to replicate and extend these findings by looking at differences between attachment styles on two different cognitive tasks: a Posner task and a Visual Search task.
- A Posner task measures how quickly a participant can reorient attention from one side of the visual field to the other when a misleading cue is given; as well as how much time is saved when attention is on the same side of the visual field.
- A Visual Search task measures a participant's ability to find a target when it is surrounded by distractors.
- Both tasks require suppression of distracting stimuli.
- Because avoidantly attached individuals suppress their thoughts and emotions associated with vulnerability we believe that they will have better performance on these tasks as they will have more practice with suppressing stimuli when compared to people low on avoidance.
- Conversely, anxiously attached individuals tend to be slower on cognitive tasks like the Stroop so we expect them to be slower than people who are low on anxiety.

Hypotheses

- Participants high on avoidance attachment will demonstrate faster responses compared to those low on avoidance attachment.
- Participants high on anxious attachment will demonstrate slower responses compared to those low on anxious attachment.

Method

Participants

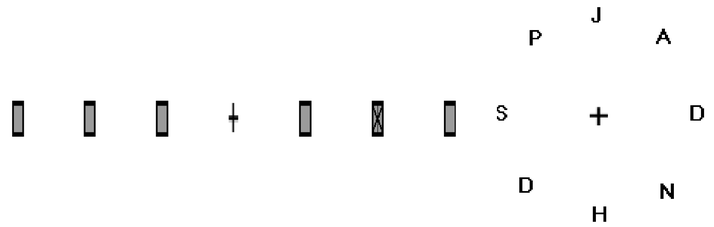
•47 participants with an average age of 19.30 yrs.

•25 participants identified as female, 19 participants as male, and 3 participants as non-binary.

Procedure

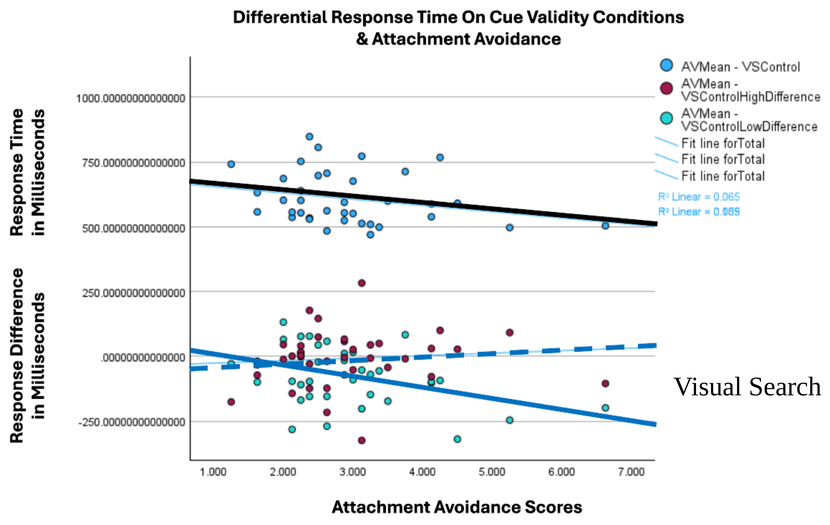
- After reading and consenting, participants were randomly assigned to one of four conditions of the study. These versions alternate the order in which participants completed each cognitive task.
- Participants sat in front of the computer screen using a chin rest to keep their head in the same position and a serial response box was used for all three tasks.
- Participants could only use their index finger to respond.
- After completing all three tasks, participants completed the Experience in Close Relationships Scale, to measure their attachment style, as well as the Big Five scale to measure their personality traits.

Lab

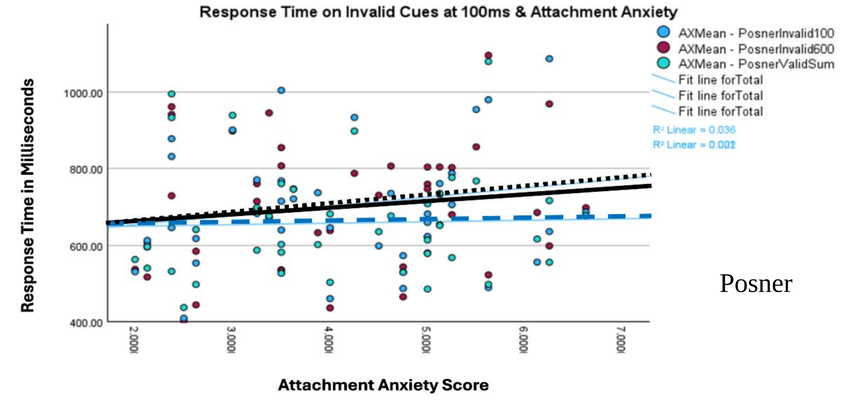


Posner

Visual Search



Visual Search



Posner

Results

- On the Posner task, the difference between response times when presented with a valid (or accurate) cue and response times when presented with an invalid cue, 100ms before the target, were found to be negatively correlated with attachment anxiety, $r(40) = -.401$, $p<.001$. In other words, as attachment anxiety increases, shorter durations between the cue and target have less influence on response time than longer durations between cue and target.
- Whereas on the visual search task, attachment avoidance was found to be negatively correlated with response time differences between control and low cue validity conditions, $r(35) = .393$, $p = .016$. This association indicates that individuals higher on attachment avoidance are less impacted by low cue validity than those lower on attachment avoidance (e.g., attachment security).

Conclusion

- The attachment avoidance finding is in line with Gillath et. al.'s finding that attachment avoidance predicted stronger resistance to distractors (Gillath et. al, 2009). Although our current sample size is small, our identified correlation similarly indicates individuals high on attachment avoidance are less susceptible to task interference, potentially due to an ability to better regulate attention. The difference between low cue validity and high cue validity performance may indicate that stronger resistance to distractors for high attachment avoidance may be reduced when the distractors are more subtle. Another potential explanation for the result is that the 70% cue validity is the last section of the task, and participants may not be as motivated.
- The association between attachment anxiety and response times under rapid cue conditions is in line with research showing attachment anxiety is associated with lower attentional vigilance toward neutral stimuli (Byrow et. al., 2016). If our findings hold, it might suggest that the anxiety-related lower vigilance occurs after a delay.

References

Edelstein, R. S., Ghetti, S., Quas, J. A., Goodman, G. S., Alexander, K. W., Redlich, A. D., & Cordón, I. M. (2005). Individual differences in emotional memory: adult attachment and long-term memory for child sexual abuse. *Personality & social psychology bulletin*, *31*(11), 1537–1548. https://doi.org/10.1177/0146167205277095

Eriksen, C., & Yeh, Y. (1985). Allocation of attention in the visual field. *Journal of Experimental Psychology: Human Perception and Performance*, *11*, 583-597.

Gillath, O., Giesbrecht, B., Shaver, P. R., Attachment, attention, and cognitive control: Attachment style and performance on general attention tasks. *Journal of Experimental Social Psychology, 45(4),* 647-654.

Gillath, O., Karantzas, G. C., & Fraley, R. C. (2016). *Adult Attachment: A Concise Introduction to Theory and Research*. Elsevier Inc. https://doi.org/10.1016/C2013-0-09705-8

Posner, M., Walker, J., Friedrich, F., & Rafal, R. (1987). How do the parietal lobes direct covert attention? *Neuropsychologia*, *25*, 135-145.

Yulisha Byrow, Chen, N. T. M., & Peters, L. (2016). Time Course of Attention in Socially Anxious Individuals: Investigating the Effects of Adult Attachment Style. *Behavior Therapy*, *47*(4), 560–571. https://doi.org/10.1016/j.beth.2016.04.005