Shyness Mindset Beliefs and Attentional Bias: An Experimental Study

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Introduction

- Shyness is “an affective-behavioral syndrome characterized by social anxiety and interpersonal inhibition that results from the prospect or presence of interpersonal evaluation” (Leary, 1986, p. 30).
- In the shyness mindset, shy entity theorists (fixed mindset) believe that their shyness is a trait about themselves that they cannot change, while shy incremental theorists (growth mindset) believe that their shyness is malleable (Beer, 2002).
- Reappraising the negative arousal that accompanies anxiety as something positive should then reduce threat vigilance, and decrease the likelihood that anxious individuals will perceive future situations as threatening (Brooks, 2014).
- Interventions that may alter intelligence mindsets have provided evidence that changes in mindset can affect academic behavior over time (Aronson, Fried, & Good, 2002).
- Anxious individuals have a tendency to overanalyze and attend to threatening stimuli related to their domain of anxiety or shyness (Pergamin-Hight, Naim, Bakermans-Kranenburg, Ijzendoorn, & Bar-Haim, 2014).
- Attentional allocation and bias can be measured in anxious individuals using an emotional pictures dot probe paradigm (Asmundson & Stein, 1994).

Hypothesis

- If an intervention can alter shyness mindset, then a dot-probe paradigm should reveal a reduction in attentional bias towards threatening stimuli.

Method

- Participants: 40 introductory psychology students with fixed shyness mindsets (59.26% female, 56% Caucasian, aged 18-25).
- Measures:
  - A shyness mindset intervention (Yeagar & Dweck, 2012)
  - An emotional pictures dot probe paradigm (Taylor, Cross, & Amir, 2015). See figure 1.
  - A 9-item, 5 point shyness mindset scale (SMS) measuring fixed shyness mindset.
- Procedure: Participants complete the SMS and then the dot probe paradigm once, are randomly assigned to the intervention or control, then complete the dot probe paradigm, and then the SMS once more.

Results

- Randomization checks were successful for pretest latency scores for both neutral, t (37) = .911, p = 0.368, and disgust, t (37) = .299, p = 0.767 trials.
- Scores on the SMS revealed significant differences in fixed shyness mindset between groups after administration of the intervention, F (1, 46) = 9.285, p = 0.004.
- No significant interaction was found of latency scores by condition, F (1, 37) = 0.112, p = 0.739. See figure 2.

Discussion

- Although the SMS indicated that individuals who received the intervention experienced a reduction in fixed shyness mindset, the dot-probe paradigm did not reveal a change in attentional bias.
- This could signify two different possibilities: the intervention did not work and self-report scores are not an accurate indicator of mindset, or the more probable option, the dot-probe paradigm is not an appropriate test for signifying changes in mindset.
- Limitations of the current study include: a lack of an eye tracking device, small sample size, and general measures of latency scores rather than specific analyses looking at each position of the pictures in relation to the stimulus.

Conclusion

- Thus far, self-report measures have determined the shyness mindset intervention to be a valid and reliable measure.
- Although the results of the current study provide no evidence of a reduction in attentional bias by means of an intervention, more research with various cognitive tasks could lead to stronger intervention reliability.
- Further investigations could one day lead to the use of the intervention in clinical settings, where practitioners could help alter fixed shyness mindset.