I. Introduction

- Anxiety is associated with different types of biases (e.g., Bar-Haim et al., 2007; Mogg and Bradley, 1998), including attentional and evaluation biases. Desimone & Duncan (1995) highlighted the competition between endogenous (top-down voluntary processes) and exogenous (bottom-up automatic processes) attention. Eysenck’s attentional control theory (2007) pointed out an enhanced attentional engagement towards threatening cues (shifting) and difficulties to move attention from them (inhibition) in anxiety.
- The aim of the study is to provide evidence for these dysfunctions in a non-clinical sample.
- This study uses an anti-saccade task to assess attentional processes and a decision task to assess emotional evaluation.

II. Hypothesis

- H1: Better performance (Reaction Time-RT, Correct Answers-CA) in pro-saccade task versus anti-saccade.
- H2: Anxiety (all types) alters efficiency (longer Reaction Time, RT) and effectiveness (less Correct Answers, CA) in anti-saccade task for emotional stimuli.
- H3: Negative interpretation (valence) of neutral stimuli and enhanced evaluation (arousal) of negative ones in anxious participants.

III. Method

A/ INHIBITION PROCESSES ASSESSMENT

- Anti-Saccade Task: Measure of cognitive inhibition (control deficit) in which participants have to suppress a reflexive saccade towards a peripheral stimulus and generate a volitional saccade in the opposite direction.

B/ EMOTIONAL EVALUATION

- Decision Task
- Categorization
- Valence
- Arousal

IV. Results

- H1: Effect of the condition confirmed (F(1.67) = 13.959, p < .001). Better CA & RT in prosaccade (92.5%) than antisaccade (88.6%) condition.
- H2: Efficiency: Hypothesis confirmed. Effect of Trait-Anxiety (TA) for social emotional stimuli (F(2, 67) = 4.806, p = .011) = Longer RT for high TA (Fig. 1).
- H3: A/ Effect of emotion on arousal (F(2, 315, 132) = 257.545, p < .001) and Categorization (F(4, 76) = 13.739, p < .001) in decision task. B/ Effect of Evaluation Anxiety (EA) on enhanced arousal of neutral stimuli for high EA and non social stimuli (F(2, 67) = 4.107, p = .023) = Worse CA for lower SAD (Fig. 2).

V. Discussion

- Attention is engaged in prosaccade condition, when the location of the target is activated.
- Participants with high anxiety-trait have greater inhibition deficit when processing human faces.
- Low SA and EAs surprisingly lead to worse performance in non-social task, suggesting a possible modulation of performances by non-social cues (to be investigated).
- A limitation of the study
- Non-clinical sample
- More females than males
- Further studies
- Steady-State Potentials to assess brain activity in anti-saccade task.
- More studies displaying neutral non-social stimuli for a better understanding of categorization processes in non anxious people.

Fig. 1 - Effect of Trait-Anxiety (TA) on Reaction Time (RT in ms) (Social Emotion Condition)
Fig. 2 - Effect of Social Anxiety (SAD) on Correct Answers (CA in %) (Non Social Condition)
Fig. 3 - Effect of Evaluation Anxiety (EA) on arousal of +, - and neutral cues (Social and Non Social Conditions)

References