

I. Introduction

- Cognitive biases have been highlighted in depression impairing inhibition abilities (Joormann & Gotlib, 2010).
- The aim of the study was to evaluate oculomotor inhibition, which is defined as a suppression of reflexive saccades toward peripheral cues (Nigg, 2000).
- To measure such processes, authors have developed an anti-saccade paradigm (Cherkasova et al., 2002).
- The present study adapted this task with emotional information to assess oculomotor inhibition in depression.

II. Hypotheses

2 main assumptions:

- H1 – Anti-saccade task would result in longer reaction times (RT) and reduced correct answer rates (CA) → Involvement of disengagement processes.
- H2 – Higher level of depression would reduce general efficiency and specifically affect disengagement abilities.

III. Method

- ATTENTIONAL ENGAGEMENT & DISENGAGEMENT ASSESSMENT

PRO-Saccade (PS) \( + \)

ANTI-Saccade (AS) \( + \)

STIMULI TYPE

<table>
<thead>
<tr>
<th>Cue 900ms</th>
<th>Target 100ms</th>
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<tbody>
<tr>
<td>No emotion</td>
<td>Social emotion</td>
</tr>
<tr>
<td>Joy, Surprise ( ^{(+)} )</td>
<td>Butterfly, Ladybug ( ^{(+)} )</td>
</tr>
<tr>
<td>Positive ( ^{(+)} )</td>
<td>Positive ( ^{(+)} )</td>
</tr>
<tr>
<td>Neutral ( ^{(-)} )</td>
<td>Neutral ( ^{(-)} )</td>
</tr>
<tr>
<td>Negative ( ^{(-)} )</td>
<td>Negative ( ^{(-)} )</td>
</tr>
</tbody>
</table>

ENHANCEMENT

Focus your attention toward the cue.

DISENGAGEMENT

Focus your attention away from the cue.

ANSWERS RECORDING

RT \( - \)

And decide the orientation (up/donw) of the arrow immediately after the cue.

In PS condition, Social RT > Non-Social RT.

In AS condition, Social errors > Non-social errors.

Involvement of disengagement processes.

IV. Results

H1 confirmed

- Main task effect (CA):
  - For all participants, AS task > PS task. \( F(1,114)=18.959, \ p<.000, \ \text{partial } \eta^2=.143. \)
  - Main stimuli-type effect (CA, RT):
    - Social errors < Non-social errors. \( F(1,114)=40.492, \ p<.000, \ \text{partial } \eta^2=.262. \)
    - RT – For all participants. \( F(1,115)=10.244, \ p=.002, \ \text{partial } \eta^2=.082. \)
    - Task*Stimuli-type interaction (RT) – (Fig. 1): In PS condition, Social RT < Non-Social RT. In AS condition, Social RT > Non-Social RT.

H2 confirmed

- Main group effect (CA, RT):
  - CA – High BDI errors > Low/Medium BDI errors, \( F(2,114)=3.261, \ p=.042, \ \text{partial } \eta^2=.054. \)
  - RT – High BDI RT > Low/Medium BDI errors, \( F(1,115)=3.309, \ p=.040, \ \text{partial } \eta^2=.034. \)

In social condition \( \rightarrow \) CA – AS errors > PS errors. \( F(4,112)=16.961, \ p<.000, \ \text{partial } \eta^2=.130. \)

In non social condition \( \rightarrow \) CA – PS errors < AS errors, for Spiders, \( t(116)=2.031, \ p=.045, \) and Ladybugs, \( t(117)=7.669, \ p<.000. \)

Emotion task*group interaction (CA): Only in Low BDI, \( F(4,112)=2.707, \ p=.034, \ \text{partial } \eta^2=.088. \)

Disgust faces errors > Neutral faces errors, \( p=.082. \)

References


