THE IMPACT OF OBSESSIONS, COMPULSIONS, WORRY, AND ANXIETY ON THE FEEDBACK-RELATED NEGATIVITY
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Background

- Some research shows the FRN is increased among those with OCD.
- Recent work shows an enhanced ERN in subjects with high levels of worry relative to healthy controls.
- The purpose is to confirm an enhanced FRN in subjects with high OC symptomatology, and also examine whether the correlated features of worry and anxiety may be responsible for an increased FRN.
- Hypothesis: Based on the results of Zambrano-Vazquez and Allen (2012), we expect high levels of OC and worry symptoms to be related to a larger FRN.

Method

- Probabilistic Learning Task

<table>
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<tr>
<th>Feedback</th>
<th>OCI-R</th>
<th>TAI</th>
<th>PSWQ</th>
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<tbody>
<tr>
<td>Correct</td>
<td>Above clinical cutoff</td>
<td>Above median</td>
<td>Above median</td>
</tr>
<tr>
<td>Incorrect</td>
<td>Below clinical cutoff</td>
<td>Below median</td>
<td>Below median</td>
</tr>
</tbody>
</table>

- Electrophysiological Recording and Processing

  - The trough peak measure: most negative value in the window 190-350 msec following the feedback, and the preceding positive peak within a 100 msec window.

Discussion

- FRN relation to ERN
  - Pattern of results mostly matched Zambrano-Vazquez & Allen (2012)
  - Groups with worry increased sensitivity to negative feedback
  - Compared to controls, experimental groups showed increased sensitivity to all FB
  - Any anxious trait affects sensitivity to feedback
  - Internal monitoring (past work) appears to show worry has a higher influence on internal processing

Conclusion

- Supports notion that FRN and ERN measure a related performance/error monitoring system
- Suggests that worry may be driving OCD effects in the FRN literature

Results

- Figure 1. PL task FRNs by group at FCz (negative and positive feedback)
- Figure 2. PL task bar graphs at peaks (negative and positive feedback)

References


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