Reward sensitivity and cognitive biases during acute major depressive episode within major depressive and bipolar spectrum disorders

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Methods

Facial Emotion Labelling Task

Participant Characteristics

<table>
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<tr>
<th>Age Mean (SD)</th>
<th>Male Mean (SD)</th>
<th>Female Mean (SD)</th>
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<tbody>
<tr>
<td>42.1 (16.5)</td>
<td>30.0 (6.6)</td>
<td>32.2 (13.6)</td>
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<tr>
<td>35.1 (12.8)</td>
<td>27.3 (4.4)</td>
<td>32.2 (13.6)</td>
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Facial emotion labelling shift-point in CTLs did not differ significantly from MDD (p=.987, g=0.03) or BSD (p=.952, g=0.10) groups. MDD and BSD groups also did not differ (p=.895, g=0.33).

Facial emotion labelling slope in CTLs did not differ significantly from MDD (p=.998, g=0.01) or BSD (p=.628, g=0.35) groups. MDD and BSD groups also did not differ (p=.499, g=0.20).

Facial emotion labelling shift-point was lower in MDD compared to CTL (p<.001, g=1.01) but not BSD (p=.150, g=0.12) participants. BSD and CTL participants did not differ (p=.980, g=0.06).

Facial emotion labelling slope in CTLs did not differ significantly from MDD (p=3.45, g=0.38) or BSD (p=.961, g=0.08) groups. MDD and BSD groups also did not differ (p=.540, g=0.33).

Anticipatory reward sensitivity was lower in MDD compared to CTL (p=.001, g=2.56) and BSD (p=.045, g=0.67) participants, and in BSD compared to CTL participants (p=.001, g=2.41).

Facial emotion labelling was negatively biased in MDD compared to CTL (p<.001, g=2.56) and BSD (p=.045, g=0.67) participants, and in BSD compared to CTL participants (p=.001, g=2.41).

Facial emotion labelling was negatively biased in MDD (p<0.05, g=2.17) and BSD (p=.113, g=0.72) participants, compared to the CTL group. MDD and BSD groups did not differ (p=.342, g=0.72).

Discussion

• Anticipatory reward sensitivity (“wanting”) discriminated MDD from CTL participants, but BSD and CTL participants did not differ. Consummatory reward sensitivity (“liking”) did not differ between MDD, BSD, or CTL groups.
• Participants with MDD and BSD did not show a negative bias or greater inconsistency in rating happy and sad facial expressions compared to CTL participants.
• MDD, BSD, and CTL groups each demonstrated unique patterns of self-attributing negative and positive traits.
• Participants with MDD and BSD showed negatively biased memory for self-referent traits compared to CTL participants.

Limitations

• Further research with a larger sample (particularly BSD participants) is needed.

Conclusion

• These findings provide evidence for common and dissociable aspects of anticipatory reward sensitivity and self-referential processing in MDD and BSD with potential diagnostic and clinical relevance.

References