METAMEMORY IN TURNER SYNDROME: A STUDY COMPARING EPISODIC AND SEMANTIC MEMORY

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OBJECTIVES

Tuner syndrome (TS) is associated with a distinctive cognitive profile including memory impairment for visual material (Lawrence et al., 2003).

The current study focuses on metamemory, defined as our knowledge about our memory function (Flavell, 1977) which is, as yet unexplored in TS.

The aim of this preliminary study was thus to determine what patients with TS know about their memory function - when their memory is impaired are they are aware of that impairment?

METHODS

To assess metamemory, this study focused on the Feeling-of-knowing paradigm (FOK).

This paradigm consists of asking participants to predict whether or not they will be able to recognize later an information that they currently cannot recall.

STUDY

RECALL and FOK

FOK: Will you recognize the name later when presented with options ?

EPISODIC MEMORY CONDITION

SEMANTIC MEMORY CONDITION

Aim: to assess metamemory knowledge on newly learnt information

Aim: to assess metamemory knowledge on general knowledge

30 face-name associations to learn

30 famous names to recall

PARTICIPANTS

<table>
<thead>
<tr>
<th>Age</th>
<th>TS group (n=10)</th>
<th>Control group (n=23)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS (WASI-R) Verbal scales</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Similarities</td>
<td>11.7 (3.31)</td>
<td>12.3 (2.81)</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>12.7 (4.58)</td>
<td>10.8 (3.23)</td>
</tr>
<tr>
<td>Arithmetic</td>
<td>9.89 (3.39)</td>
<td>9.59 (2.02)</td>
</tr>
<tr>
<td>TS (WASI-R) Performance scales</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Block design</td>
<td>7.31 (3.31)</td>
<td>9.23 (3.38)</td>
</tr>
<tr>
<td>Matrix reasoning</td>
<td>8.62 (2.11)</td>
<td>8.69 (2.71)</td>
</tr>
<tr>
<td>Autism spectrum quotient</td>
<td>37.75 (7.50)</td>
<td>56.70 (13.34)</td>
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<tr>
<td>Autism spectrum quotient</td>
<td></td>
<td></td>
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<tr>
<td>IQ (Baron et al., 2003)</td>
<td>80.32 (14.99)</td>
<td>83.79 (7.92)</td>
</tr>
</tbody>
</table>

No group differences in Age, IQ, Autism spectrum Quotient, or Theory of mind scores

RESULTS

These preliminary results show:

Participants with TS recall fewer new face-name associations but a similar number of famous faces, thus showing a dissociation between episodic and semantic memory.

Participants with TS gave accurate Feeling-of-knowing judgments, showing proficient metamemory (intact knowledge of memory function).

Conclusion: Participants with TS have a good insight into their memory performance

Limitations: Floor effect on the episodic recall task, small sample size

Future research will explore whether participants with TS with Theory of Mind deficits have metamemory deficits; plus the links with academic outcomes.

CONCLUSIONS

References


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