**Introduction**

14-month old infants and adults have a working memory (WM) capacity limit of 3 items\(^1\-^3\), but can sometimes overcome this limit by chunking objects into sets\(^4\-^5\). Infants younger than 7.5 months appear to have a WM capacity of less than 3 items\(^6\-^7\).

Can younger infants, whose WM has not yet fully developed, use chunking as a strategy to overcome WM capacity limits?

**Methods**

**Participants:**
- 7-month-old infants (6;15-7;14)
- n=20 in each experiment

**General set up:**
- Violation of expectation
- 2 familiarization trials
- 8 test trials (4 pairs of expected and unexpected outcomes)

**Exp 1: WM capacity at 7 months**

- 7 month-old infants fail to represent 3 items in WM

**Exp 2 & 3: Can 7 month-old infants chunk to increase WM capacity?**

- Infants chunked objects grouped by spatial location, screen colour, and object features

**Exp 4 & 5: What cues are necessary for 7 month-old infants to chunk?**

- Infants chunked objects grouped by spatial location and object features

**Exp 6: Conflicting cues**

- Infant failed to chunk objects when different chunks were specified by spatial location than by object features

**Conclusions**

1. Young infants whose WM capacity has not yet fully developed can still increase their capacity through chunking items into sets.
2. However, they require multiple, redundant grouping cues.

<table>
<thead>
<tr>
<th>Exp</th>
<th>Chunking cues</th>
<th>Success?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>2 &amp; 3</td>
<td>multiple, redundant</td>
<td>×</td>
</tr>
<tr>
<td>4 &amp; 5</td>
<td>single</td>
<td>×</td>
</tr>
<tr>
<td>6</td>
<td>multiple, conflicting</td>
<td>×</td>
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</tbody>
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**References**