INTRODUCTION

Emotional Enhancement of Memory (EEM): Emotional information remembered better than non-emotional information (Kensinger & Corkin, 2004; Talmi & McGarry, 2012).

• Mediation Model accounts for immediate EEM (Talmi, 2013) and suggests that it’s associated with factors present at encoding (e.g., distinctiveness).

The List Composition Effect on the EEM: When emotional and non-emotional items are intermixed in a list, EEM occurs. However, when comparing all-emotional to all-non-emotional lists, EEM diminishes (Talmi et al., 2007).

• eCRM Model suggests that encoding and retrieval processes may account for the list composition effect (Talmi et al., 2019).

• This effect is well-replicated in young adults (e.g., Nguyen & McDaniel, 2014) but understudied in older adults (e.g., Grühn et al., 2005; Grühn & Scheibe, 2007).

AIMS: To (i) test how distinguishability between emotional and neutral pictures in different list compositions affect memory and (ii) whether this effect is further influenced by age.

• Hypotheses: (i) Young adults will replicate the list composition effect. (ii) Older adults may show effect specifically for positive stimuli, given positivity effects common in older age (e.g., Mather & Carstensen, 2005); or due to age-related declines in attentional encoding and retrieval processes, older adults may not show the list composition effect.

METHODS

111 adults from the United States between ages (18 – 35) and 55+ consented to participate either via Amazon’s Mechanical Turk or Prolific.

55 Young Adults (23 F, 21 M, 2 unreported; Age mean = 27.45, SD = 4.64)

56 Older Adults (38 F, 15 M, 3 unreported; Age mean = 61.25, SD = 6.60)

Encoding: 240 pictures (80 positive, 80 negative, 80 neutral) from International Affective Picture System (IAPS; Lang et al., 1997) matched on valence and arousal

6 lists (3 mixed, 3 pure; 40 pictures per list) randomized:

Mixed: Neg-Neu
Mixed: Pos-Neu
Mixed: Neg-Pos
Pure: Negated
Pure: Positive
Pure: Neutral

Retrieval: Free recall immediately after each encoding task (6 recall tasks in total)

EXAMPLE OF RECALL TASK:

<table>
<thead>
<tr>
<th>Item of interest</th>
<th>Points</th>
<th>weighing scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall</td>
<td>1 point</td>
<td>correct match</td>
</tr>
<tr>
<td>Correct order</td>
<td>1 point</td>
<td>correct order</td>
</tr>
<tr>
<td>Total</td>
<td>2 points</td>
<td></td>
</tr>
</tbody>
</table>

Scoring Guide

RESULTS

Older adults (OA) and younger adults (YA) show list-composition effect

Whether pos-neg content is intermixed or combined with neutral content, YA remember neg better than pos, while OA show the opposite pattern.

CONCLUSIONS

The List Composition Effect occurs in older adults as well as younger adults

• Both age groups showed better memory for emotional than neutral stimuli when presented in mixed lists (i.e., the EEM effect), but the effect is diminished when comparing pure-emotional lists to pure-neutral lists.

When comparing mixed lists that either mix emotion-neutral (neg-neu/pos-neu) or that mix emotional content (pos-neg), the results again demonstrate the list-composition effect, but further suggest evidence of a positivity effect with older age.

• The valence x age group interaction is only marginal, so future work will be needed to clarify whether older adults reliably remember more positive than negative pictures as compared to young adults when the positive and negative content is intermixed.

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REFERENCES


