INTRODUCTION

• As adults age, language difficulties increase and word retrieval becomes slower (Burke et al., 1991; Payne & Silcox, 2019).
• Language is produced within context, making it important to study word retrieval in different sentence contexts.
• Older adults might have intact semantic knowledge (Norman et al., 2016), but might have reduced inhibitory and/or semantic control (Norman et al., 2016; Hasher & Zacks, 1988). This can influence how older adults’ language comprehension is affected by context.
• Previous research assessing how context can facilitate language comprehension throughout ageing has shown mixed outcomes (Payne & Silcox, 2019).
• There is also minimal research that examines whether task demands can further modulate age effects during comprehension.

Main questions:

➢ Can semantic context predicting a target word (“matching context”) facilitate comprehension of that word in both younger and older adults?
➢ Can semantic context predicting an alternative word to the target word (“mismatching context”) hinder comprehension of that word in both younger and older adults?
➢ Does task demand (i.e., reading for comprehension versus answering questions after reading) modulate these context effects in either age group?

METHODS

Participants:
40 older adults (65-80yrs):
• Mean age = 68.78 years
• 23 female and 17 male

40 younger adults (18-35yrs):
• Mean age = 23.96 years
• 23 female and 17 male

Match effect: difference in reading times (RT) between neutral sentence contexts and matched sentence contexts.
Mismatch effect: difference in RT between neutral sentence contexts and mismatched sentence contexts.

DESIGN:

Within-subjects:
• Context: matched/mismatched/neutral
• Task demand: sentences with/without questions
Between-subjects:
• Age: older/younger adults

Self-paced reading:
Participants pressed the spacebar after reading each part of the sentence.

Matched context:
Set 1: The farmer milked the cow
Mismatched context:
Set 1: The parents went to the pet shop to buy the cow
Neutral context:
Set 1: They took a photo of the cow

Task demand:
Read sentence for comprehension only
The farmer milked the cow early in the morning.
OR
Read sentence followed by a question
What did the farmer milk?

RESULTS

The match effect did not differ significantly between younger and older adults.

Figure 1. Means and standard errors showing the match and mismatch reading times relative to neutral sentences in each age category and task demand.

Self-paced Reading:
• Main effect of age: older adults had slower reading times.
• Main effect of context: matched contexts facilitated reading times for both age groups equally (“match effect”).
• Mismatch effect was not significant.

Task demand:
• No main effect of task demand.
• Did not modulate match effect for either age group.

DISCUSSION

Main findings:

➢ When reading matched contexts, both age groups are able to use their semantic knowledge to prime upcoming words for quicker recognition upon exposure.
➢ This matched context facilitation is present regardless of task demand.
➢ Mismatched contexts neither help nor hinder comprehension for either age group.

Limitation:
• The study was conducted online via Prolific.co, meaning that participants were not monitored by the researcher.
• Younger adults may have had different intentions for participating to older adults (i.e. earn money vs. interest).

Future research:
• Determine whether bilinguals can use context to predict upcoming words in their second language to the same extent as monolinguals.

References