**INTRODUCTION**

- Research has indicated that mentalising skills predict reading comprehension in children.
- Mentalising is the ability to understand the mental states of oneself and others—that underpin behaviour. Without the ability to take others’ perspectives it would be difficult for readers to understand characters’ behaviours in narrative texts.
- Well-structured narratives integrate the ‘landscape of action’ (events in the plot) with the ‘landscape of consciousness’ (characters’ motivations underpinning these events), meaning that narrative events are propelled by the characters’ mental states.
- Increased mentalising may be associated with increased representation of characters’ thoughts and feelings during narrative processing, which produces a deeper understanding of the text.
- Mentalising may also support reading comprehension by enriching situational models of the text. Kintsch (1988) proposes that the situational model is the highest level of comprehension. The situational model is the reader’s mental representation of the text’s meaning, which includes any explicit information from the text and inferences based on prior knowledge.
- So far, there has been little research investigating mentalising’s role in explaining individual differences in reading comprehension in adults.
- There are few validated measures of mentalising and reading comprehension for adults, and different mentalising tasks do not load onto a single factor throughout the lifespan.
- There are also overlapping task demands between tests purporting to measure mentalising (e.g. Short Stories) and tests of reading comprehension.

**Aims**

- To investigate the factor structure of a number of different measures of mentalising (visuo-spatial, mental state attribution, mental state reasoning) and reading comprehension (narrative and expository tests).
- To assess whether individual differences in mentalising ability predict unique variance in reading comprehension in adults, when vocabulary and inference generation skills are controlled.

**METHOD**

**Participants**

- Ninety-four adults aged 18-68 (M=30.70, SD=13.92) were recruited via Prolific and a university research participation scheme. Sixty-six participants identified as female, twenty-eight as male.

**Materials**

- Mentalising tasks:
  - Directors Task (DT) - visuo-spatial mentalising
  - Reading the Mind in the Eyes (RMET) – mental state attribution
  - Strange Stories – mental state reasoning
  - Short Stories mental state subscale – mental state reasoning

- Reading comprehension tasks:
  - Adult Reading Test (ART 2) – standardised measure of expository text comprehension
  - Short Story Task total score – narrative text comprehension

- Control tasks:
  - Vocabulary – LEXTALE
  - Inference generation – Implicit Management Task (IMT)

**Procedure**

- Testing took place online and lasted one hour. All tasks were performed in the same order: Four Instructional Manipulation Checks were embedded within the test to monitor participants’ attention.

**RESULTS**

**Factor structure of mentalising and reading comprehension measures**

- Factor analyses showed that the Short Story Task did not load clearly with the other tests of mentalising or tests of reading comprehension. Therefore, the Short Story Task was not used as a measure of reading comprehension in further analyses. Factor analyses produced two factors explaining 57% of the variance: Kaiser-Meyer-Olkin = .59; $\chi^2$ (10) = 40.81, $p < .001$, with the Strange Stories, ART 2 total score, RMET, Short Story total score in the first factor (loadings: .59-.77), and the DT in the second factor (loading: .88). These results suggest there were overlapping task demands (e.g., language abilities) between the variables in the first factor.

**Association between mentalising variables**

- There were only small correlations between our mentalising variables, which is consistent with previous research. The Short Story Task did not correlate reliably with the other mentalising measures.

**Association between mentalising and reading comprehension**

- The Strange Stories was most closely associated with reading comprehension (ART 2).
- There were small non-significant correlations between the DT, SST mental state subsection and the ART 2.

**Predicting reading comprehension**

- The combined set of predictor variables explained 35% of the variance of the ART 2 score ($R^2 = .35$, $p < .001$). The mentalising variables accounted for a unique 16% of variance in reading comprehension. Strange Stories was the only mentalising task that was a significant independent predictor.

**Outcomes of ART 2**

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**DISCUSSION**

- The Short Story Task was not reliably associated with other tests of mentalising, or with a standardised test of reading comprehension. Further validation of this measure is needed.
- Mental state reasoning (Strange Stories) was a unique predictor of reading comprehension in adults, while visuo-spatial mentalising and mental state imputation were less closely related to reading comprehension.
- These findings expand on childhood research by indicating that mentalising abilities, specifically mental state reasoning, explain individual differences in reading comprehension in adulthood.

However, more research is needed to explain the mechanisms of this relationship.

**References:**