Suffix interference and processing speed effects in young and older adults' visual feature binding

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There is debate regarding whether or not working memory for bound visual objects is more age-sensitive than that for individual visual features. To investigate this potential 'age-related binding deficit', we administered a visual recognition task to young and healthy older adults. In experiment 1, coloured shapes were sequentially presented, either with or without a subsequent, to-be-ignored, coloured shape (suffix). Performance was generally better with the individual shape memory test relative to binding (coloured shape test), although a greater binding deficit was found in older than young adults, regardless of whether or not a suffix had been presented. Additional analyses identified that the deficit was only observable within the lure (test probe absent) trials, suggesting that it is more likely to be observed in circumstances that encourage overwriting of bound objects at test. A second experiment will also be presented, which was aimed at assessing the potential role of processing speed in visual binding. Both age groups performed the task at relatively slow and fast encoding speeds, tailored to each group, allowing us to explore the circumstances that may lead to binding deficits and/or serial position curves in both young and older adults.

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