

Central auditory processing in older adults: Age and working memory

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Introduction. There is an increasing interest in the role of cognition in speech understanding in noise. Cognitive performance declines with increasing age. This decrement is especially critical for older individuals as speech understanding in noise puts high demands on cognitive capacities such as working memory. In this study, we examined the relationship of age-related cognitive decline on speech understanding in noise by using a group of older and a group of younger normal hearing participants.

Methods. Working memory capacity was investigated using the reading span test (RST). Results of the RST were compared with the ability to understand sentences in a stationary noise (LIST). Young and older adults were tested.

Results. We demonstrated that the older adults have significantly worse working memory capacity scores compared to the younger. The older adults also showed to have significantly more difficulty understanding sentences in noise. Results from the RST did not correlate with the results of the speech recognition in noise test.

Conclusion. The present study shows declining effects of age on both working memory capacity and speech understanding in noise. But results show that declining working memory capacity with age is not clearly reflected in the ability to understand speech in stationary noise.