

Media release

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Chronic tinnitus and its impact on demanding cognitive tasks

Individuals with chronic, moderate tinnitus do more poorly on demanding working memory and attention tests than those without tinnitus, according to research conducted at the University of Western Sydney.

However, on less complex tasks, no significant differences were found, suggesting that tinnitus has no effect on tasks that involve more involuntary, automatic responses.

The study, Tinnitus and Its Effect on Working Memory and Attention, which appeared in the February issue of the 'Journal of Speech, Language, and Hearing Research', adds to the growing body of research on the relationship between tinnitus and cognition, demonstrating an association between tinnitus and reduced cognitive function.

The research has important implications for helping people with tinnitus approach new or difficult tasks that require strategic and conscious control.

"We wanted to learn more about the ways in which chronic tinnitus disrupts cognitive performance," says Susan Rossiter, a former research Masters student at the MARCS Auditory Laboratories at the University's Bankstown Campus.

"Our goal is to use this knowledge to develop management strategies that will help minimize this disruption."

"Ms Rossiter's research project was our first foray into tinnitus," says fellow researcher, Associate Professor Catherine Stevens of the MARCS Auditory Laboratories. She adds, "Our most recent research has also investigated other important variables such as depression and hearing loss."

Dr Gary Walker, Honorary Adjunct Fellow at the MARCS Auditory labs adds, "Our ultimate goal is to use this knowledge to develop management strategies that will help minimize disruption."

Thirty-eight people participated as subjects. Nineteen, who were ages 34-63 years, came from English-speaking backgrounds, and had constant, moderate to severe tinnitus made up the experimental group. The control group also had 19 participants. They matched individuals in the experimental group by age, educational level, occupation, and verbal IQ.

Tinnitus is the perception of sound in the absence of auditory stimulation.

Described as a "ringing in the ears" or "buzzing" or "whooshing" sound, it can be temporary, intermittent, or permanent.

Although its exact cause is often unknown, tinnitus can be a symptom of hearing loss, allergies, or exposure to loud noise or ototoxic medicines.

Past research has shown that it can be accompanied by anxiety, insomnia, problems with auditory perception, and poor general and mental health.

The 'Journal of Speech, Language and Hearing Research' is published by the American Speech-Language-Hearing Association. The ASHA is the US professional, scientific, and credentialing association for more than 120,000 audiologists, speech-language pathologists, and speech, language, and hearing scientists.

A copy of the research paper is available.

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