CultureCase

Music and audio books can enhance the rehabilitation of stroke patients

This research was conducted by **Teppo Särkämö and 12 others** from **University of Helsinki and universities and research facilities in Finland and Canada**

Summary

This study explored the impact of listening to different audio stimuli on patients who had suffered from stroke caused by rupture of a major artery in the brain. The patients listened to either music, audio books or nothing at all. The results showed that listening to music and speech after stroke correlate with an increased capacity of retaining auditory or acoustic information (what the medical literature calls ‘echoic memory’).

Researchers tested the effects of music or audio book listening

54 patients recruited over the course of two years at Helsinki University Central Hospital completed this study. The patients were randomly distributed into music-listening or audio book-listening groups and were provided with their favourite music or audio books by a therapist. A third group of patients who did not listen to any audio material served as a control group. The audio therapy commenced shortly after stroke and lasted two months. All patients underwent a series of complex tests one week, three months and six months after stroke; these tests mapped their brain activity by recording and processing reactions to specific sound stimuli. This was followed by an extensive assessment of relevant aspects of their memory and attention using standardised tests and dedicated software.

Both activities enhanced brain rehabilitation

Results indicated that overall, listening to music or audio books after damage to the brain equally enhanced patient brain activity, which in turn, is likely to have mediated the improvement of patient echoic memory during the recovery period. The scientists hypothesised that the positive results could be due to the fact that these audio stimuli may enhance a variety of healing processes in the brain that normally take place after damage. Therefore, the study promotes the clinical use of music and audio book listening for facilitating brain repair.

This summary is by **Elena Popa, King's Knowledge Exchange Associate**

Keywords

audio books **experiment** **music** **stroke** **Finland** **brain**

Title	Music and Speech Listening Enhance the Recovery of Early Sensory Processing after Stroke
Author(s)	Särkämö, T., Pihko, E., Laitinen, S., Forsblom, A., Soinila, S., Mikkonen, M., Autti, T., Silvennoinen, H. M., Erkkilä, J., Laine, M., Peretz, I., Hietanen, M. & Tervaniemi, M.
Publication date	2010
Source	Journal of Cognitive Neuroscience, Vol 22, Iss 12, pp 2716-2727
Link	**http://www.mitpressjournals.org/doi/full/10.1162/jocn.2009.21376**
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By **Culture.Case** | 2 February 2017 | **Health and wellbeing impacts of arts and culture** |