

Extra Task C11-04 Uses of Would

Complete with the correct article (on no article)

Music Helps Reconnect Elderly Patients with their Memories in New Study

By Andy Corbley

When Paul McCartney wrote “Get Back,” he never would have predicted how useful or relevant the song would become for music therapists.

The song’s refrain—“Get back to where you once belonged”—might as well be _____ therapist encouraging _____ dementia patient to recall _____ distant memory. In new research, Psyche Loui, _____ associate professor of music, is attempting to do exactly that.

Loui found that for older adults who listened to some of their favorite music, including _____ Beatles, connectivity in the brain increased. Specifically, Loui—and her multi-disciplinary team of music therapists, neurologists and geriatric psychiatrists—discovered that music bridged _____ gap between _____ brain’s auditory system and reward system, _____ area that governs motivation.

“There’s something about music that is this functional connectivity between the auditory and reward system, and that’s why music is so special and able to tap into these seemingly very general cognitive functions that are suddenly very engaged in folks with dementia who are hearing music,” said Loui, who directs _____ Music Imaging and Neural Dynamics Lab, and whose paper was published in [Nature’s Scientific Reports](#).

The original idea for this research came out of Loui’s own experiences playing music in nursing homes. She recalled how people who couldn’t finish a sentence or thought would suddenly harmonize and sing along to a song she was playing.

“[Music] seems to engage _____ brain in this way that’s different than everything else,” Loui said.

_____ researchers had _____ group of older adults between _____ ages of 54 and 89 from _____ Boston area listen to _____ playlist for _____ hour every day for eight weeks and journal about their response to the music afterward.

Loui and _____ team would scan the participants' brains before and after listening in order to measure their neurological response.

Playlists were highly personalized and featured a combination of _____ participants' self-selected songs, which ranged from _____ Beatles to Bruce Springsteen, and _____ preselected mix of classical pieces, pop and rock songs and new compositions created by Hubert Ho, _____ associate teaching professor of music at Northeastern. Participants would then rate each song based on how much they liked it and how familiar it was.

"The most important lesson that we learned from the music therapist was that there is no one-size-fits-all for what kind of music works best," Loui said.

What _____ researchers found was striking: music was essentially creating a channel directly between the auditory center and _____ medial prefrontal cortex, _____ brain's reward center and one of _____ areas to lose its activity and functional connectivity in aging adults, especially in folks with dementia, Loui said.

Music that was both familiar and well-liked tended to activate the auditory and reward areas more. However, _____ music that participants selected themselves provided _____ even stronger connection between these two areas of the brain.

"This might be _____ central mechanism for what changes happen in _____ brain when you're listening to music and when you're consistently, persistently and mindfully listening to music over _____ course of _____ intervention," Loui said.

Loui hopes this study, which is one of _____ first to document neurological changes from extended exposure to _____ music-based intervention, could have _____ significant impact in _____ field that has quickly risen in prominence.

_____ National Institute of Health is currently pushing initiatives around music therapy, and AARP's Global Council on Brain Health recently convened _____ panel, which Loui served on, to examine evidence of music's influence on brain health. The panel ultimately [formed recommendations](#) for how people ages 50 and over can incorporate music into their lives to promote mental wellness.

Music's ability to calm older adults and people with mental illness is well-documented, Loui said; but what's less known is how and to what extent music can help improve memory, cognition and executive function.

"That's something we're working on right now, and I think there might be something about the fact that music is _____ art that unfolds over time," Loui said. "For example, you're listening for _____ beat and then you can tap your toes to _____ beat. That kind of process engages _____ brain's reward systems and cognitive systems in ways that might be beneficial for long-term cognitive functions."

Moving forward, Loui hopes to extend her study to older adults who have cognitive and neurodegenerative disorders, people who might benefit even more from _____ effects of music therapy.

"We're trying to design these new therapies to take advantage of the rhythmic properties of music and the rhythmic properties of _____ brain," Loui said, "and the tuning of neural populations towards the acoustic signals of the music might be useful for improving cognition."