

A Theoretical and Clinical Account of Music and Aphasia

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Editorial Note

After many researchers and clinicians working in the field of aphasia, as well as for those in music, the first thought that responds to mind on the topic of “Music and Aphasia” is the clinical use of music for aphasia rehabilitation after producing stroke, specifically Melodic Intonation Therapy (MIT). Indeed, MIT is the most well-known music intervention for aphasia and a popular topic, both in the general media and amongst researchers, with an increasing number of research group attempting to provide evidence regarding MIT efficacy and methods. However, as evident in this special particular issue, the topic of “Music and Aphasia” is much broader than MIT and mentioned theoretical presumptions and clinical implications that extend far beyond a single therapeutic comeback.

The relationship between music and language has been debated in the literature for some couple of years, with some particular theories focusing on similarities and change it in between music and language and potential shared processing and others observed on domain specificity and dissociations between music and language. The aphasia rehabilitation literature, this has been promoted a degree of ambiguity, such that both the shared processing and the dissociations between music and language have been taught as reasons to use music in aphasia rehabilitation. For example, it has been suggested that singing in individuals with non-fluent aphasia provides an indirect way or a scaffold for expressive language, using methods such as music’s right-hemisphere rhythm. However, it has been yet to be fully explained how cognitive systems for music and language that are dissociable in the face of brain injury or disorder abnormalities at the same time be conveniently linked to enable music networks to support language. Regardless of the position taken in these debates, it is clear that further research is needed to clarify the sufficient links between music and language and their role in understanding music-based aphasia therapies.

As investigated the relationship between anomia and music by comparing lexical retrieval deficits for musical melodies and instruments and their neuroanatomic correlates. Their findings suggest that naming of musical entities both melodies and instruments tends to be more difficult than other categories of items, perhaps due to the age of acquisition, and that naming of melodies and instruments

both rely on distributed networks that include the left temporal pole. Theoretically, musical instrument naming was dependent on a broader network that includes sensorimotor regions and appears to be distinct where as compared to naming of other non-unique, non-living items focused on the relationship between music and motor-speech impairments. Using a retrospective case-control analysis of numerous studies, they showed that the presence of a motor-speech disorder such as apraxia of speech significantly predicted where as participants would show improvement in speech and language outcomes when they treated with singing interventions for aphasia.

Studies such as these that focus on the links between specific speech and language impairments and music are significant, not only due to their clinical utility but also because they contribute to our understanding of how music and language are interacted in the brain. For the same clinical and theoretical reasons, it shows that investigates how individual components of music are linked to speech and language can also be of benefit.

References

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