

Core music elements: rhythmic, melodic and harmonic musicians show differences in cognitive performance

Porflitt, F., & Rosas, R. (2020). Core music elements: rhythmic, melodic and harmonic musicians show differences in cognitive performance (Elementos básicos de la música: músicos rítmicos, melódicos y armónicos muestran diferencias de desempeño cognitivo). *Studies in Psychology*, 41(3), 532-562. Accessed 25 Jul 2021.

Abstract

This study explores the cognitive profiles of different types of expert musician adults, and suggests a frame of separation to categorize them according to the musical instrument they play. These differences would be based on the core elements of music (rhythm, melody and harmony), which activate the nervous system differently in expert adult musical performers. Several tests were applied, including executive function tasks such as verbal and visual-spatial working memory, cognitive inhibition, go/no-go and cognitive flexibility tasks, as well as tests that measure other cognitive aspects, such as fluid intelligence, divided attention and processing speed. Four groups were established to compare cognitive performance: rhythmic, melodic and harmonic musicians, and a control group (non-musicians). The results show different cognitive performances between the groups of musicians — as well as between musicians and non-musicians: the harmonic group showed the best results, following by the melodic group, the rhythmic group and lastly the control group.

Keywords

Cognition, Executive functions, Rhythm, Melody, Harmony.