

# MOZART EFFECT AND MUSIC PSYCHOLOGY: RECENT DEVELOPMENTS AND FUTURE RESEARCH

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The field of Music Psychology has grown in the past 20 years, to emerge from being just a minor topic to one of mainstream interest within the brain sciences (Hallam, Cross, & Thaut, 2011). Despite the plethora of research attempts to examine the so-called hotly disputed “Mozart effect” which was first reported by Rauscher, Shaw, and Ky (1993, 1995), we still know little about it. This group of researchers were the first to support experimentally that visuospatial processing was enhanced in participants following exposure to Mozart’s Sonata for Two Pianos in D major (K.448). Although the first research attempts referred to the Mozart effect as an easy way of improving cognitive performance immediately after passive music listening to Mozart’s sonata K. 448 (Chabris, 1999), after which healthy young adult students could perform with enhanced spatial-temporal abilities in tasks such as the Paper Folding Task (PFT), nowadays there is a number of studies indicating that this specific music excerpt does not necessarily have this magical influence on all cognitive abilities (e.g. on the overall Intelligence Quotient) in humans and on the behavior of animals (for a review see Giannouli, Tsolaki & Kargopoulos, 2010). In addition to that, questions arise whether listening to this ‘magic music excerpt’ does indeed have benefits that generalize across a wide range of cognitive performance, and if it can induce changes that are of importance for medical and therapeutic purposes in patients with neurological disorders (e.g. epilepsy) or psychiatric disorders (e.g. dementia, depression) (Verrusio et al., 2015).

Although two meta-analyses in the past support the existence of a moderate influence on cognitive tasks after brief listening to Mozart’s ten-minute sonata (Chabris, 1999; Hetland, 2000), more studies are needed, in order to define specific protocols that result in these claimed changes (Verrusio et al., 2015). For example, there are recent studies claiming that Mozart’s K. 448 sonata can improve mood (Giannouli, 2013; Giannouli, Lytras & Syrmos, 2012), but not verbal memory (Giannouli, Tsolaki & Kargopoulos, 2010; Giannouli, Kolev & Yordanova, 2018), visuospatial short-term memory (Giannouli & Popa, 2017), and attention (Giannouli, 2012) across young and old healthy adults.

A possible explanation for the (in)existence of the Mozart effect may be found in the fact that music elicits a variety of emotions and the way music excerpts are emotionally perceived by each individual. Thus, Mozart effect may be associated with any form of music that has or is perceived as having energetic and positive emotional qualities for the participants, and not necessarily specific structural-morphological characteristics (Thompson, Schellenberg & Husain, 2001).

Given the heterogeneity of the relevant research studies and the contrasting results, future research should further focus in a more systematic way not only in replicating the methods employed in previous studies (e.g. if music is preceding or used as background, the types-genres of music excerpts that are used for comparing the different experimental conditions), but also on clarifying other aspects of this claimed phenomenon such as the individual characteristics that listeners have, and more specifically the role of music-induced emotions (Thompson, Schellenberg & Husain, 2001), the role of music attitudes (Giannouli, 2018), as well as other demographic factors that differentiate individuals’ cognitive and emotional reactions, such as age, gender, health status and music education that participants have received in their life (Giannouli, Kolev & Yordanova, 2018). But the unanswered question still remains... Is there actually a ‘Mozart effect’?

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