

Does playing mozart to babies make them smarter literature review samples

[War](#), [Intelligence](#)



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Introduction

An individual does not get fully developed until after the second year after birth. This means that brain development does not complete at birth since it takes additional two years outside the womb of the mother for it to be fully developed . Now, there are a lot of things that can happen and experiences that can be encountered within those two years. Some sources suggest that the events and experiences are among the factors that can influence nervous system growth and brain development in particular.

It is being argued that an infant who got more exposed to more stimulating experiences during such window of time would have higher brain development potentials compared to those who were not blessed with the same opportunities . This argument leads to the notion that the stimuli that an infant has received during his first two years can be crucial to his or her brain's growth and development, as well as the creation of connections in his neural cell networks. Now, there are some studies that suggest that early exposure to music or musical stimulation may help a child's brain reach greater potentials because musical stimulation during those stages

reportedly improves the central nervous system's ability to generate neural connections utilized in abstract reasoning . The objective of this paper is to determine, by means of conducting a comprehensive literature review, whether there is indeed a correlation between listening to musical pieces played by Mozart or musical stimulation in general and intelligence. This paper will make use of the best current evidences in order to determine the impact of Mozart's music or musical stimulation in general on intelligence and brain development. At the end of the paper, the author has come up with the conclusion that although it has been proven by and established in numerous literatures that the brain does not stop from being developed until after two years post-birth, early musical exposure or stimulation does not necessarily make them smarter.

Review of Literatures

In a study published in the Royal Conservatory in 2011, Canadian Scientists headed by a York University professor named Dr. Sylvain Moreno discovered that pre-schoolers can manage to improve their verbal intelligence following an intervention that exposed them to 20 days of classroom instruction that would utilize an interactive and music exposure-based cognitive training media such as cartoons . In the study, 48 four to six year old pre-schoolers were screened. After voluntarily deciding to participate in the study, the 48 pre-school subjects underwent a comprehensive computer-based cognitive training program using media resources such as cartoons that were projected on a large classroom wall, featuring colorful and animated cartoon characters who delivered the lessons.

The 48 students were divided into two groups. The first group received visuo-spatial skills-based training that emphasized on the development of visual art recognition and creation, and was connected to concepts such as lines, colors, shapes, dimensions, and perspective. The second group received a different form of intervention in the form of music-based, cognitive training that utilized a combination of cognitive, perceptual, and motor tasks, and was related to training on musical dimensions such as voice, melody, pitch, rhythm, and other basic musical concepts applicable to pre-schoolers. Each of the group received a one-hour duration of training each day inside the classroom over the course of four weeks. Baseline measures were established prior to the implementation of the study by means of IQ tests, focusing on the children's word recall, attention span, and problem solving and analytical skills, and language-based reasoning. After the four week implementation period, the same set of IQ testing procedures were done and compared.

Results of the study “strongly affirm the resonance between music and child development, and encourage us to think of music not just as a medium or tool through which treatment might be delivered, but as the treatment itself” . This was a good study that outlined the possible effects of early music exposure and stimulation among children on their intelligence but only a small sample size of 48 was used. Given the complexity of the testing and observation procedures, the results of this research may not be reliable as compared to other studies with similar objectives that relied on a larger sample population.

The Journal of Psychology published an empirical study in 2007 that focused

on determining the possible effects of exposure to music on cognitive performance among two groups, the first one being composed of Canadian undergraduates and the second one of five year old children. The testing were basically done by exposing the two groups in an up-tempo kind of music (for the first group) and in familiar children songs instead of Mozart or other classical composer's songs (for the second group) and checking the results on an IQ subtest (for the first group) and attention span (for the second group). The results of the study suggest that exposure to different types of music or music-based stimuli can improve performance on a variety of cognitive tests; that these enhanced effects are generally caused by changes in mood and emotional states; and that the effects can be generalized across cultures and age groups . This can be a good resource for answering the research question on whether Mozart music can indeed make babies smarter because in the paper's literature review, it cited studies conducted in the 1990s about the different possible effects of Mozart on children's intelligence. The authors of the Journal of Psychology paper however had a different assumption—an assumption that described how Mozart's music could not, in any way, affect children or infants' intelligence. In this case, the authors used a different form of music and the results on intelligence, attention span in particular, showed how music in general, and not just music written by Mozart, can potentially lead to enhanced intellectual outcomes. One possible weakness of this paper is the fact that it focused on only one intellectual outcome per group. In the case of the second group—the one composed of five year old children, for example, the only outcome that the researchers used as a basis whether the musical

stimulation led to enhanced intellectual performances was their attention span on their drawing activity. With only one intellectual outcome, the results may not be as reliable or conclusive compared to when a more defined and standardized set of intellectual outcomes would be used. Waterhouse (2006) argued that there is inadequate evidence for multiple intelligences, the Mozart effect, and the emotional intelligence theories, suggesting that there is “ inadequate empirical support that is not consistent with cognitive neuroscience findings”. Waterhouse (2006) further argued that results and findings obtained from such empirical studies should not be used or applied directly in education since a good number of those empirical researches were inappropriately performed, despite their proponents’ argument that their researches were the opposite of what Waterhouse described them to be. These proponents argued that the effects of studies suggesting that the Mozart effect and other intellectual and emotional intelligence theories can be readily and directly applied on education . Upon Waterhouse’s close examination, however, it showed the otherwise. In Cherniss et al.’s (2006) study for example, they claimed that programs such as SEL or social emotional learning could lead to enhanced positive youth development and mental health, reduce substance abuse and other antisocial behavior, and even improve educational outcomes. The problem with their paper, according to Waterhouse, is the fact that Intelligence, particularly emotional intelligence, was not well represented and because the concept of emotional intelligence and the different factors that can allegedly affect it are not yet empirically validated . This paper by Waterhouse (2006) was basically a reply that addressed the proponents of

the different theories on intelligence, the Mozart effect, and other relevant theories about intelligence. The author had the assumption that such mechanisms (e. g. the Mozart effect) are not relevant or do not have anything to do with intelligence. He proved the claims by drawing on literatures previously published about the topic and pointing out the loopholes on the different intelligence theories and the Mozart effect by using the different points of weaknesses from the previously published papers. In the end, Waterhouse was able to present a good point and assert his original claims and assumptions although he kind of wrote his paper with one objective in mind: to prove that all other proponents of intelligence theories or the Mozart effect are all wrong. The outcome was a one-sided paper that is well-backed by relevant literature.

According to an empirical study published by the American Psychological Association about the long term positive associations between music lessons and intelligence quotient, a consistent duration and frequency of musical exposure correlated positively with intelligence quotient, academic abilities, and academic outcomes among the 147 six to eleven year old children used in the part one of the study . The sample population was divided into two groups. The first group was all about the long term positive associations between music lessons and IQ among six to eleven year old children; the second group, on the other hand, focused on the same outcomes but on younger subjects. In the second group, it has been determined that the effects were similar but the associations between musical exposure during childhood and academic outcomes during undergraduate years were found to be significantly weaker compared to the correlation found in the first

study group . Nonetheless, the collective results obtained from both study groups suggest that formal exposure to music during childhood may be associated positively with academic performance and outcomes, and IQ; and that those associations may be small or low-impact but their effects can be general and long-lasting even up until the individual grows to his undergraduate years .

Conclusions

In summary, the literatures reviewed for the research question does playing Mozart to babies make them smarter suggest that early exposure to classical music and not just music written by Mozart, led to increase intelligence and other intelligence-related outcomes such as attention span, and memory, among others. One of the four literatures we reviewed, however, particularly Waterhouse's study about educational theories, intelligence theories, and the Mozart effect, suggested that there were no significant or accurate empirical evidences that could guarantee the reliability of the currently available papers about such theories to the point that the findings in the papers can be used as a basis in making changes in the field of education. In short, he did not support the idea of the Mozart effect and other intelligence theories. All the other remaining literatures reviewed in the paper have showed positive correlation between musical stimulation and exposure during the early years of development and intelligence, although in Schellenberg's study in 2006, only a weak correlation between the two variables, albeit general and long-lasting, was found. Nonetheless, playing

classical music and not just music created by Mozart can indeed make babies smarter, based on the evidences from the literatures reviewed.

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