Psychology of Classical Music

Research on Mood, Intelligence, Learning, Epilepsy & Mozart Effects

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Beethoven - *Joseph Karl Stieler, Wikipedia*

Research indicates that classical music can induce a positive mood, and that musical instruction can boost brain power.

Studies suggest that listening to classical music decreases tension and improves mood (Rea et al., 2010). Research also indicates that playing music enhances specific aspects of intelligence such as verbal ability and spatial-temporal reasoning, though it does not increase general intelligence.

Classical Music and Linguistic Abilities

A number of research studies have supported the fact that classical music can have a positive effect on linguistic abilities. One study found that those who listened to Vivaldi while exercising increased their scores on verbal fluency tests after their workouts compared to those who exercised without music (Ohio State University, 2004).

Another study of 90 boys in Hong Kong between the ages of 6 and 15 found that those who learned to play music with their school's string orchestra program scored higher on tests of verbal memory than a control group that did not receive musical training. The boys in the music group were also able to learn more new words than those in the control group (Yim-Chi Ho et al., 2003).

The Mozart Effect

The Mozart effect has been the subject of much research in recent years, after it was found that listening to Mozart's music may increase specific types of intelligence, particularly spatial-temporal abilities (Rauscher et al. 1993). However, a recent meta-analysis conducted by Pietschnig et al. (2009) suggests that simply listening to classical music is unlikely to produce these gains, but various studies indicate that playing music does enhance certain brain-based skills.

Rauscher et al. (1997) found that children who were given keyboarding lessons, taught musical notation and other music-related skills, and learned to play simple melodies by Mozart and Beethoven achieved scores that were approximately 30% higher on tests of spatial-temporal reasoning than children of the same age who did not receive musical training, and these effects did not diminish over time. Thus, it appears that greater gains can be achieved by not only listening to music but also learning about it and creating it.

Experiments have also been conducted to determine whether rats and mice are subject to the Mozart effect. Rauscher et al. (1998) found that in-utero and early childhood exposure to Mozart improved the ability of rats to solve mazes quickly later on, though Steele (2003) argues that the evidence is weak, given that some other researchers have not been able to replicate the results.

David Merrill conducted an experiment in which one group of mice were subject to round-the-clock classical music and another to heavy metal music while a third acted as a control group in a no-music condition. The Mozart mice made good progress in reducing their maze-solving times, but the first experiment was cut short when the heavy metal mice attacked and killed one another. A second experiment with lower music volumes and mice separated to prevent violence yielded results in favour of Mozart: The classical music mice solved the mazes more rapidly than those in the other two groups, and the heavy metal mice became worse at maze-solving than when they had first been introduced to the mazes (Wertz, 7 February 1998).

Mozart's Music and Epilepsy

Mozart's music has a beneficial effect on those suffering from epilepsy. A study of epileptics found that listening to Mozart's music, even when unconscious, decreased epileptiform brain activity in the majority of subjects. A case study of one girl found that her seizures decreased significantly after listening to Mozart for just 10 minutes of each waking hour (Jenkins, 2001).

Additional Classical Music Experiments

Capers (2009) details the use of classical music to reduce crime in various contexts, the most impressive of which was the London Underground experiment, whereby classical music was piped throughout London's crime-infested subway system. The result was a 37% decrease in vandalism, a 33% reduction in robbery and 25% fewer staff assaults.

North et al. (2003) found, in keeping with prior research in other contexts, that people spend more money when listening to classical music. Those eating at a particular restaurant purchased more food and drinks when the restaurant played classical music than they did listening to pop music or in the no-music condition.

Other Types of Music

Although classical music has been the focus of the majority of research into music's effects on intelligence and learning, research indicates that listening to any type of music that is personally enjoyable may potentially enhance certain cognitive abilities.

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