



Psychology

The Mozart Effect

Leveled Assessment ____/4

Name:

Section:

Score: ____/5

Directions: Read the article below about the effect of music on prenatal development and answer the series of thought questions below.

'Mozart effect': can classical music really make your baby smarter?

Does the so-called "Mozart effect" exist?

By Telegraph Reporter

6:00AM GMT 28 Mar 2015

The 'Mozart effect' phenomenon was first suggested by a scientific study published in 1993 in the respected journal Science.

It showed that teenagers who listened to Mozart's 1781 Sonata for Two Pianos in D major performed better in reasoning tests than adolescents who listened to something else or who had been in a silent room.

The study (which did not look at the effect of Mozart on babies) found that college students who listened to a Mozart sonata for a few minutes before taking a test that measured spatial relationship skills did better than students who took the test after listening to another musician or no music at all.

The finding, by a group at the University of California whose study involved only 36 students, led crèches in America to start playing classical music to children and the southern US state of Georgia even gave newborns a free classical CD.

Most recently Helena Bonham Carter has said that listening to Mozart and other classical music while pregnant has made my children 'unbelievably smart'.

But there has been debate since about whether the effect exists.

The effect is a myth

A report, published in the journal Pediatrics, said it was unclear whether the original study in 1993 has detected a "Mozart effect" or a potential benefit of music in general.

But they said a previous study of adults with seizures found that compositions by Mozart, more so than other classical composers, appeared to lower seizure frequency.

Lubetzky's team said it was possible that the proposed Mozart effect on the brain is related to the structure of his compositions as Mozart's music tends to repeat the melodic line more frequently.

In more condemning evidence, a team from Vienna University's Faculty of Psychology analysed all studies since 1993 that have sought to reproduce the Mozart effect and found no proof of the phenomenon's existence.

In all they looked at 3,000 individuals in 40 studies conducted around the world.

"Those who listened to music, Mozart or something else – Bach, Pearl Jam – had better results than the silent group. But we already knew people perform better if they have a stimulus," said Jakob Pietschnig, who led the study.

"I recommend everyone listen to Mozart, but it's not going to improve cognitive abilities as some people hope," he added.

A study in Nature in 1999 by Christopher Chabris, a psychologist, adding up the results of 16 studies on the Mozart effect, found only a one and a half point increase in IQ and any improvements in spatial ability limited solely to a paper-folding task.

The benefits of music to kids

Music seems to prime our brains for certain kinds of thinking. After listening to classical music, adults can do certain spatial tasks more quickly, such as putting together a jigsaw puzzle.

Why does this happen? The classical music pathways in our brain are similar to the pathways we use for spatial reasoning. When we listen to classical music, the spatial pathways are "turned on" and ready to be used.

This priming makes it easier to work a puzzle quickly. But the effect lasts only a short time. Our improved spatial skills fade about an hour after we stop listening to the music.

Learning to play an instrument can have longer-lasting effects on spatial reasoning, however. In several studies, children who took piano lessons for six months improved their ability to work puzzles and solve other spatial tasks by as much as 30 percent.

Why does playing an instrument make such a difference? Researchers believe that musical training creates new pathways in the brain

Why classical music

The music most people call "classical"--works by composers such as Bach, Beethoven, or Mozart--is different from music such as rock and country. Classical music has a more complex musical structure. Babies as young as 3 months can pick out that structure and even recognize classical music selections they have heard before.

Researchers think the complexity of classical music is what primes the brain to solve spatial problems more quickly. So listening to classical music may have different effects on the brain than listening to other types of music.

This doesn't mean that other types of music aren't good. Listening to any kind of music helps build music-related pathways in the brain. And music can have positive effects on our moods that may make learning easier.

Thought Questions:

1. Explain what research is being conducted as described in the article?
2. How is this an example of applied psychology?
3. What were the results of the different studies of the experiments on the Mozart Effect? Why did researchers come to this conclusion?
4. What are the supposed benefits of listening to, or learning to play, classical music?

