



Your brain on music during the workday

**Hanna Smith**

Glance around the office. How many of your co-workers do you see wearing headphones? Are you? I'm typically always connected to a playlist on Spotify or Pandora at home and work. Of course, the song lineup and musical genre differ depending on the task at hand.

My life is usually set to background music.

That being said, I've heard differing opinions regarding listening to music in the workplace. Does it decrease productivity? Or is it a positive brain stimulus in appropriate doses at appropriate times?

According to a study by researchers at Radboud University in the Netherlands and University of Technology Sydney in Australia, the answers to those questions are yes and yes.

It's all relative.

Music can be either beneficial or harmful to workplace production depending on the context of the situation and the type of music applied to a scenario. For example, the study found upbeat music with joyful themes – think "Happy" by Pharrell Williams – enhanced divergent thinking that cultivates creativity. However, it also found that happy songs did not impact problem-solving, convergent thinking.

The study format was simple. Five groups comprising 155 volunteers were given a variety of tasks to complete. Four groups worked while listening to classical music – including Gustav Holst's "Mars" and Antonio Vivaldi's "Spring" – aimed to stimulate specific moods. The fifth group worked without any music. The groups listening to music with a positive sound generally were more productive in cultivating original ideas.

Classical music is often considered the most beneficial genre for brain stimulus – and for good reason. It even has a name: The Mozart Effect. According to an article published by Pennsylvania State University, classical music was found to stimulate neurological pathways similar to spatial reasoning. It also enabled subjects to perform tasks quicker.

However, a study published by Ashford University found music's benefit is often a "beauty is in the

eye of the beholder" situation.

"Different styles can produce the same result, as long as they align with your musical preferences," the Ashford University article said. "In this way, it's the brain's relationship with familiar and favored music that is key."

This is where the multiple playlists come in. For example, the singer-songwriter Lumineers channel on Pandora is my article-writing station, while Colombian Karol G salsa vibes are great for an upbeat and positive feel throughout the day.

Music, then, is a hormone stimulant. Happy songs produce positive environments, which induces dopamine release. Dopamine is a neurological transmitter that influences motivation and responds to reward. It's also the hormone damaged by drug or alcohol addiction. It's an important regulator of mood and behavior, vital for normal function in the psyche.

Music is a valuable brain stimulus that activates areas of the brain simultaneously and can even stimulate neurological pathways that were considered lost. A number of years ago, I was part of a swing dance group that performed at veterans' nursing homes with routines catered toward World War II era veterans, many of whom had dementia. Through engaging their brains with auditory stimuli from the big band music and visual stimuli with period-dressed dancers performing swing routines, it resulted in some individuals' reactivation of lost memory pathways. Although this reclaiming of memory was sometimes only temporary during the music and dance, it is evidence that music is a powerful neurological stimulant.

This is also the same reason why many parents purchase devices that safely project music to a baby in the womb. A study published by the National Center for Biotechnology Information, found fetal exposure to music has long-term neurological impacts on information retention. In the study, fetuses exposed to "Twinkle, Twinkle Little Star" responded better to the tune when exposed to it again at 4 years old – as if the song was familiar to them because it had created neuron pathways before birth.

Amazing, right?

All of this to say, it's also important to note proper headphone usage. The American Osteopathic Association recommends listening to music through headphones at 60 percent volume for 60 minutes a day. Because the majority of us listen to music during work for longer than an hour, reduce the volume only as loud as you need it. Then fire up the playlist and let your brain get to work.

Springfield Business Journal Features Editor Hanna Smith can be reached at hsmith@sbj.net.