

How listening to music 'significantly impairs' creativity

February 27 2019



A student listening to music Credit: Lancaster University

The popular view that music enhances creativity has been challenged by researchers who say it has the opposite effect.

Psychologists from the University of Central Lancashire, University of Gävle in Sweden and Lancaster University investigated the impact of [background music](#) on [performance](#) by presenting people with verbal

insight problems that are believed to tap [creativity](#).

They found that background [music](#) "significantly impaired" people's ability to complete tasks testing verbal creativity—but there was no effect for background library noise.

For example, a participant was shown three words (e.g., dress, dial, flower), with the requirement being to find a single associated word (in this case "sun") that can be combined to make a common word or phrase (i.e., sundress, sundial and sunflower).

The researchers used three experiments involving verbal tasks in either a [quiet environment](#) or while exposed to:

- Background music with foreign (unfamiliar) lyrics
- Instrumental music without lyrics
- Music with familiar lyrics

Dr. Neil McLatchie of Lancaster University said: "We found strong evidence of impaired performance when playing background music in comparison to quiet background conditions."

Researchers suggest this may be because music disrupts verbal working memory.

The third experiment—exposure to music with familiar lyrics- impaired creativity regardless of whether the music also boosted mood, induced a positive mood, was liked by the participants, or whether participants typically studied in the presence of music.

However, there was no significant difference in performance of the verbal tasks between the quiet and library noise conditions.

Researchers say this is because library noise is a "steady state" environment which is not as disruptive.

"To conclude, the findings here challenge the popular view that music enhances creativity, and instead demonstrate that music, regardless of the presence of semantic content (no lyrics, familiar lyrics or unfamiliar lyrics), consistently disrupts creative performance in insight problem solving."

More information: Emma Threadgold et al, Background music stints creativity: Evidence from compound remote associate tasks, *Applied Cognitive Psychology* (2019). [DOI: 10.1002/acp.3532](https://doi.org/10.1002/acp.3532)

Provided by Lancaster University

Citation: How listening to music 'significantly impairs' creativity (2019, February 27) retrieved 26 April 2023 from <https://medicalxpress.com/news/2019-02-music-significantly-impairs-creativity.html>

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