Abstract

● The “Mozart Effect” suggests that spatial-temporal tasks are performed better after listening to Mozart’s music
● There were two experiments done to evaluate this effect
  ○ Experiment One: Replicated the effect and found that performance (of a spatial-temporal task) was better following listening to music by Mozart, or Schubert compared to silence before performing the task (control condition)
  ○ Experiment Two: The control condition was changed from silence to the listening of a narrated story, under these conditions the performance was based on the listener’s preference
    ■ If the listener preferred a narrated story they performed better following the story compared to the music
    ■ If the listener preferred Mozart, they performed better following the music compared to the story
Introduction

● Replication of a previous study ("Mozart Effect" by Rauscher, Shaw, and Ky 1993, 1995)

● The new study was modified:
  ○ Experiment 1: Participants listened to a piece composed by either Mozart or Schubert and the control conditions sat in silence, then each group were given a spatial-temporal task afterwards
  ○ Experiment 2: Instead of sitting in silence, the control condition was listening to a story and the music stayed the same

● This study looks further into the thought that exposure to Mozart enhances spatial-temporal tasks
Methods

- Recruited 84 undergraduate participants: 56 for experiment 1, 28 for experiment 2.
- The first 10 minutes of Mozart’s Sonata for two pianos and Schubert’s Fantasia for piano were digitally recorded onto a Power Macintosh computer.
- Stimulus presentation and response recording were controlled by a customized program created by PsycScope 1.1 software.
- Control conditions for experiment 1 consisted of sitting silence for 10 min.
- Control conditions for experiment 2 consisted of listening to a short story for 10 min.
- Each student participated in 2 conditions (music and control) on separate days within a maximum of 2 weeks.
- Experiment 1, half of the 56 subjects listened to Mozart and half listened to Schubert in music conditions, and in control conditions sat in silence with headphones.
- Experiment 2, all 28 subjects listened to Mozart in the music condition, and in control condition listened to a short story.
Results

Experiment 1 & 2

Table 1. Mean number of items correct in Experiments 1 and 2

<table>
<thead>
<tr>
<th>Experiment</th>
<th>N</th>
<th>Music</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>28</td>
<td>Mozart</td>
<td>12.75 (3.38)</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>Schubert</td>
<td>12.36 (4.05)</td>
</tr>
<tr>
<td>2</td>
<td>28</td>
<td>Mozart</td>
<td>13.00 (3.80)</td>
</tr>
</tbody>
</table>

Note. Standard deviations are given in parentheses.

Table 2. Mean number of items correct in Experiment 2 as a function of listeners’ preference

<table>
<thead>
<tr>
<th>Preference</th>
<th>n</th>
<th>Mozart</th>
<th>Story</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mozart</td>
<td>13</td>
<td>14.62 (2.40)</td>
<td>13.23 (2.35)</td>
</tr>
<tr>
<td>Story</td>
<td>15</td>
<td>11.60 (4.29)</td>
<td>12.67 (3.37)</td>
</tr>
</tbody>
</table>

Note. Standard deviations are given in parentheses.
Discussion

- Because performance was improved with both Mozart and Schubert it appears that “the mozart effect has nothing to do with Mozart”
- The study shows that listening to any classical piece may improve performance on spatial-temporal tasks
- The results also imply that “when any positive stimulus is paired with a less engaging stimulus” performance may be improved
- “Listners performed better following the condition they preferred”
- Positive emotions and stimuli promote positive performance results
- Negative emotions and stimuli promote negative performance results