**How does Background Noise effects concentration?**

**What I am researching**

For my research task, I have been finding, out how background noise levels affect an individual's concentration.

**Why I picked this topic**

I found this research task a very interesting subject to focus on because it could assist people in completing tasks they are struggling with in the future. I conducted three different tests, on a group of people and age ranges, to see if noises aid an individual or not.

**What I did for the first task**

Firstly, I created a table with twenty-five boxes, with each box containing a different number of shapes. For example, the first box in the table, has one star, two triangles and three circles. Each person that took part in the research, was timed, to work out how many of the boxes, had so many shapes, per box.

For the first question, I asked, “How many boxes have three stars in them?” As soon as I asked that question, I started a timer. The person taking part in the research then, counted all the boxes, to check how many boxes had three stars. Whilst they did the first question, I played <https://www.youtube.com/watch?v=d1MWxSUO4ts>

this clip of a baby crying repeatedly, until they knew the answer. Once they knew the answer, I stopped the timer and wrote down their results. After completing the first task I then asked them “How many boxes have three circles per box?”.

I started the timer again, but this time played this <https://www.youtube.com/watch?v=jX6kn9_U8qk>

, which is the sound of rain pouring. Once the individual taking part in the research, worked out the answer, I stopped the timer and wrote down their results. For the final task, I asked “How many boxes have three tingles per box”. This time I did not play any sounds and wrote down the results after the individual finished.

**Responses from the first test**

One of the participants said to me that, they felt there was a learning curve with this test.

“I found it hard to focus with no sounds it put me on edge”

“The rain sounds were very pleasant”

**What I did from the feedback**

so I acknowledge this and made a second test

**What I did for the Second test**

I made another set of questions with the same concept as the first test, but I asked different questions to prevent a learning curve I asked for each question how many stars four per box circles three per box and triangles two per box.

**Responses from the second test**

“I struggled with no sound”

“I got the no sound question wrong, but the rain sound was my best score and I got that one right I find rain sounds calming”

“the baby crying made me lose count”

“I did not feel that there is a learning curve”

**Final test**

For the final test, I went back to having the number of shapes the same just like test one where I asked how many boxes contain one star, triangle and circle.

**Responses from the final test**

“the baby was annoying”

“I lost count during the no-sound test and got the answer wrong”

“I lost focus during the baby sounds”

**Conclusion**

Test 1 Average times

Good sound bad sound no sound

Test 2 average time

Final test average time

These results and quotes from participants show that No sound can make your mind wander so you lose focus and could get the answer wrong.

The baby crying (bad sound) caused a distraction to some of the participants which took longer to answer

And the good sound (rain noises) helped some of the participants as they found it calming and/or relaxing helping them answer more quickly.

**Supporting evidence that other researchers have found and why it associates with my test.**

A field study assessed subjective reports of distraction from various office sounds among 88 employees at two sites. In addition, the study examined the amount of exposure the workers had to the noise to determine any evidence for habituation. Finally, respondents were asked how they would improve their environment (concerning noise), and to rate examples of improvements in their job satisfaction and performance. Out of the sample, 99% reported that their concentration was impaired by various components of office noise, especially telephones left ringing at vacant desks and people talking in the background. No evidence for habituation to these sounds was found. These results are interpreted in light of previous research regarding the effects of noise in offices and the ‘irrelevant sound effect’.

This research shows me that a group of 88 office employees took part in an assessment to examine. Noise does affect office work in this case but it is the office sounds that distract.

Authors : SP Banbury & DC Berry

<https://www.tandfonline.com/doi/abs/10.1080/00140130412331311390>

Previous research has found that introverts' performance on complex cognitive tasks is more negatively affected by distracters, e.g. music and background television, than by extroverts’ performance. This study extended previous research by examining whether background noise would be as distracting as music. In the presence of silence, background garage music and office noise, 38 introverts and 38 extroverts carried out a reading comprehension task, a prose recall task and a mental arithmetic task. It was predicted that there would be an interaction between personality and background sound on all three tasks: introverts would do less well on all of the tasks than extroverts in the presence of music and noise but in silence, performance would be the same. A significant interaction was found on the reading comprehension task only, although a trend for this effect was present on the other two tasks. It was also predicted that there would be a main effect for background sound: performance would be worse in the presence of music and noise than in silence. Results confirmed this prediction. These findings support the Eysenckian hypothesis of the difference in optimum cortical arousal in introverts and extroverts.

From this research, I have gathered that introverts struggle to concentrate more than extroverts. This shows it is the type of person you are.

Authors: Adrian Furnham & Lisa Strbac

<https://www.tandfonline.com/doi/abs/10.1080/00140130210121932?src=recsys>

Rating scale questionnaires were administered to 600 students in three age groups, 12–13, 15–16 and 20–21 from Japan, the UK, Greece and the USA. The questionnaires explored the extent of playing music while studying, the kinds of tasks when music was played, the perceived effects of music on studying, the characteristics and types of music played while studying and the factors that influenced the decision to play music while studying. Statistical analysis revealed both commonalities and differences in playing music while studying related to both age and culture. Some tasks were more frequently accompanied by music than others. Students reported being able to make decisions about the impact of background music on their performance. The results are discussed in their educational implications.

Depending on the task you may need music to keep you focused.

# Authors: Anastasia Kotospulou & Susan Hallam

<https://www.tandfonline.com/doi/full/10.1080/03055690903424774?src=recsys>