

Susceptibility to Auditory Distraction and Academic Achievement

Teighan Francis, BA (hons)

Introduction

There are many situations in which we must attempt to focus our attention, attending to task-related information, while attempting to disregard irrelevant incoming stimuli. The auditory system uses not only the ear structures, but all the surrounding bones to process auditory stimuli, meaning even with the use of physical barriers such as earplugs, we are constantly open to the possibility of attentional capacities being reoriented to obligatory processing of irrelevant auditory stimuli, thus leading to distraction. This study considered one's susceptibility to distraction and its relationship to academic achievement.

Methods

- Participants read passages in 3 different auditory conditions (none, deviating, & changing state), completing a math page for delay and passage related questions between each condition
- Participants self-reported on academic achievement & distractibility
- Participants also completed a quiz as an additional measure of achievement

Results

- Recall between conditions did not significantly differ ($p=.90$)
- Distractibility and academic achievement were normally distributed and participants were divided into low, medium, and high levels of each variable.
- Analysis of recall scores as a function of the 3 auditory conditions, distractibility, and academic achievement found no significant effects
- The effect distractibility ($p=.24$) and academic achievement ($p=.33$), while not significant, still showed the expected pattern, with better recall performance for participants with higher academic achievement and lower distractibility
- Distractibility had a significant negative correlation with recall in the deviating ($p=.03$) & changing state ($p=.03$) conditions
- Academic achievement had a significant positive correlation with recall in the deviating ($p=.03$) and changing state ($p=.01$) conditions
- Regression analysis revealed that together distractibility and academic achievement accounted for a significant proportion of performance variance in the deviating ($p=.02$) and changing state ($p=.01$) conditions
- There were no significant findings within the control condition

Conclusion

- Despite not reaching significance, the pattern fits predictions, suggesting a starting point for further research taking into account limitations

Limitations

- Sample restricted to first-year undergraduate students
- Measure of academic achievement was reliant on self-report and limited evaluation, using students further on in their studies with developed transcripts would be preferable
- Distracting stimuli were presented through a speaker at the front of the room, which could have lead to both unnatural and unequal influence
- Follow-up found that participants were aware of the purpose of the study, which could have influenced results

Implications

- Educational settings
 - Accessibility considerations
 - Equal Opportunity
 - Ex. lectures, testing, study areas