

The Gender Differences in Multitasking

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Abstract

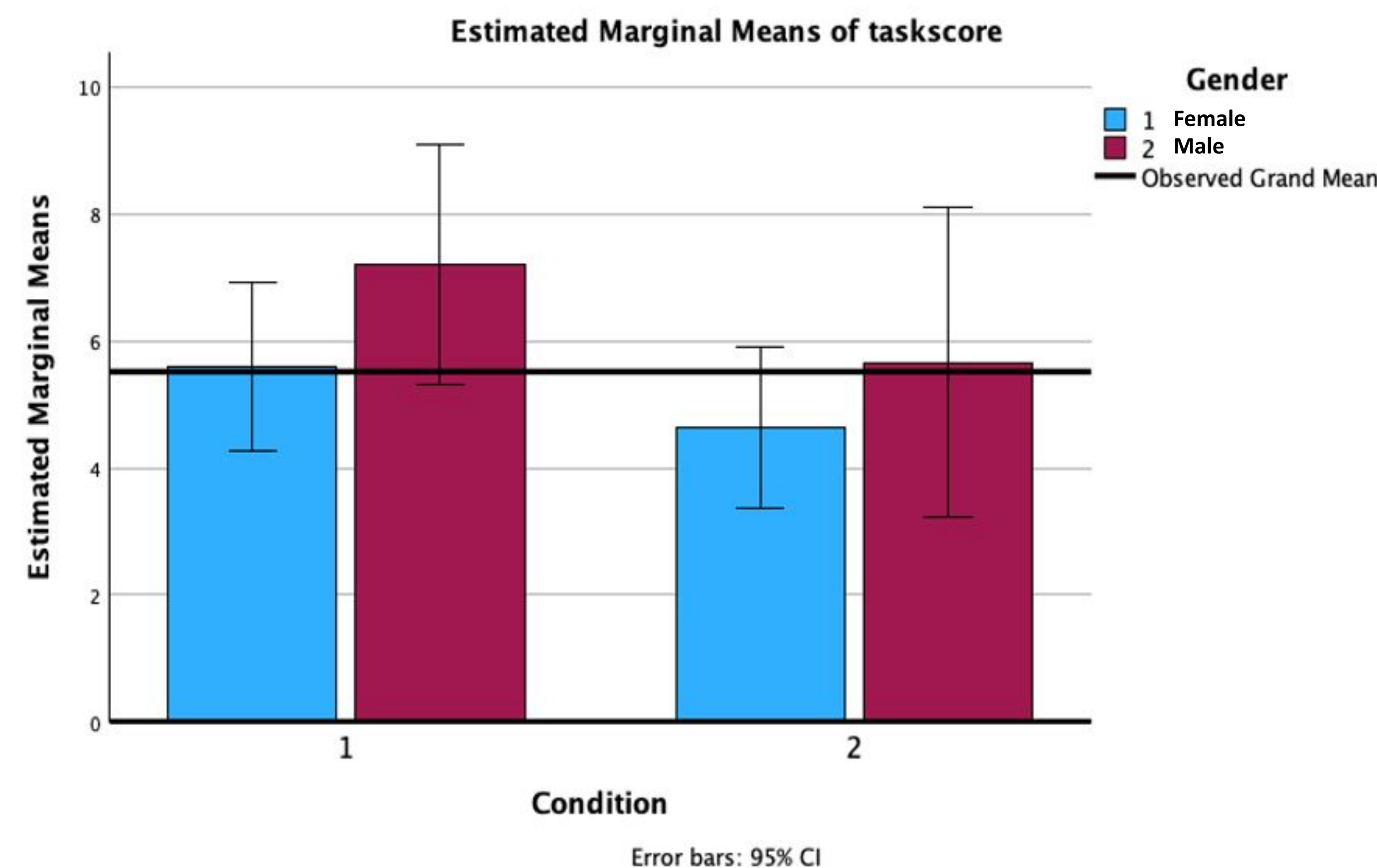
- Multitasking is used in everyday life, but it may hinder comprehension of certain information we learn everyday (May et al., 2018).
- This research investigates how undergraduate students may be affected by multitasking.
- This research also investigates the role that gender plays into comprehension.
- Our hypothesis was that non-multitasking participants would have higher comprehension scores than multitasking participants. Also, that female participants would have higher scores.
- The results from the study came out to be non significant and failed to reject the null hypothesis.

Introduction

- Why it matters: Students multitask daily — understanding its effect on learning can improve study strategies.
- Common belief: 80% of people think women are better at multitasking (Szameitat et al., 2015).
Reality check: Research shows mixed results on gender and multitasking performance (Hirsch et al., 2019; Todorov et al., 2015).
- Cognitive factors: Executive function, spatial ability, and attention control all influence multitasking (Himi et al., 2023).
Research question: Does multitasking impact comprehension in undergrads? Are there gender differences?
- Hypotheses:
 - Multitasking lowers comprehension
 - Women will outperform men across both groups

Method

- **Participants:** ~30 undergrads from Cal Lutheran, randomized by day, recruited via SONA
- **Conditions:**
 - **Multitasking group:** Podcast + puzzle
 - **Non-multitasking group:** Podcast only
- **Materials:**
 - *Radar* podcast (Spotify)
 - Puzzle
 - 10-question comprehension test
 - Demographic survey (gender, age, multitasking habits)
- **Procedure:**
 - Consent → assigned to condition → listen to podcast → test → survey → debrief
- **Variables:**
 - **IV:** Task condition (multitask vs. not)
 - **DV:** Test score
 - **Demographics:** Gender, age, habits
- **Analysis:**
 - **Paired t-test:** Compares comprehension in multitasking vs. non-multitasking groups
 - **Two-way ANOVA:** Tests gender × condition effects on comprehension



Results

- There was an **insignificant effect** of Gender differences on Comprehension Scores between the two groups, $F(1,28)=2.287, p>0.05$.
- There was an **insignificant effect** of the Multitasking condition on Comprehension Scores, $F(1,28)=2.061, p=0.163$
- There was an **insignificant effect** of Gender on the ability to Multitask and the effect it had on Comprehension Scores, $F(1,28)= 0.107, p= 0.746$
- The results fail to reject the null hypothesis on multitasking vs non multitasking group, Group 1 being the control group ($M=0.613, SD=0.236$), compared to Group 2 being the multitasking group ($M=0.507, SD=0.183$); $t(28)=1.334, p>0.05$
- Overall, multitasking was not found to be a significant factor in comprehension of material the participants listened to. In addition, gender is not a confounding variable and was not found to have any significant differences in comprehension.

Conclusions

- This experiment has found that multitasking does not play a significant role in causing lower comprehension of audio learning.
- This experiment also found that there is not a significant difference between genders in comprehension.
- For future research on this matter, it would be beneficial to do an examination on different age ranges.

References

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