



HOW DOES MUSIC PREFERENCE RELATE TO PERSONALITY AND MEMORY?

INTRODUCTION

How do the Big 5 Personality traits relate to preference for different music genres? Our research investigates how the different music genres would affect the participant’s memory and reveal their personality traits.

Some research shows that there is a relationship between memory and the type of music we listen to while studying. Personality traits might also moderate the relationship.

Birman & Ferguson (2022) conducted a quasi-experiment that examined the relationship between the music genre and memory. The study's findings revealed that background music generally had a minor impact on memory function. Rock music was the only outlier since it reduced long-term memory function.

Chamorro-Premuzic (2010) investigated the relationship between the Big Five personality traits and music preference using a questionnaire. More extroverted participants indicated a preference for upbeat music, while more open participants preferred complicated music.

HYPOTHESIS

We hypothesized that two personality traits -- neuroticism and openness -- would be correlated significantly with music preferences.

METHODOLOGY

The participants for this study included 26 students in Research Methods and Cognition courses at Southern New Hampshire University. The students voluntarily participated in the study. There were four males and 22 females, all between the ages of 18-22.

A 34-question online survey was presented with Qualtrics. The questions consisted of multiple choices, text entries, and scales.

RESULTS

There was a statistical trend showing that music played while studying diminished memory compared to the quiet condition. While the genre of music did not affect memory.

We also analyzed how personality traits related to music preference. There was a positive correlation between personality traits of extraversion and music preference for Electronic Dance Music. We did not find a correlation between neuroticism and openness in relation to music preference.

CONCLUSION

Our findings suggest that music, regardless of genre, can diminish memory in and of itself.

The above findings may provide students as well as educational organizations an understanding of how music affects one’s memory while studying. While other studies have focused on how music preference affects memory and personality traits respectively, our study also examined how music affects studying in real time.

Our study also shows that music preference relates to some personality traits. Future research could examine various ways that learning strategies interact with personality and learning.

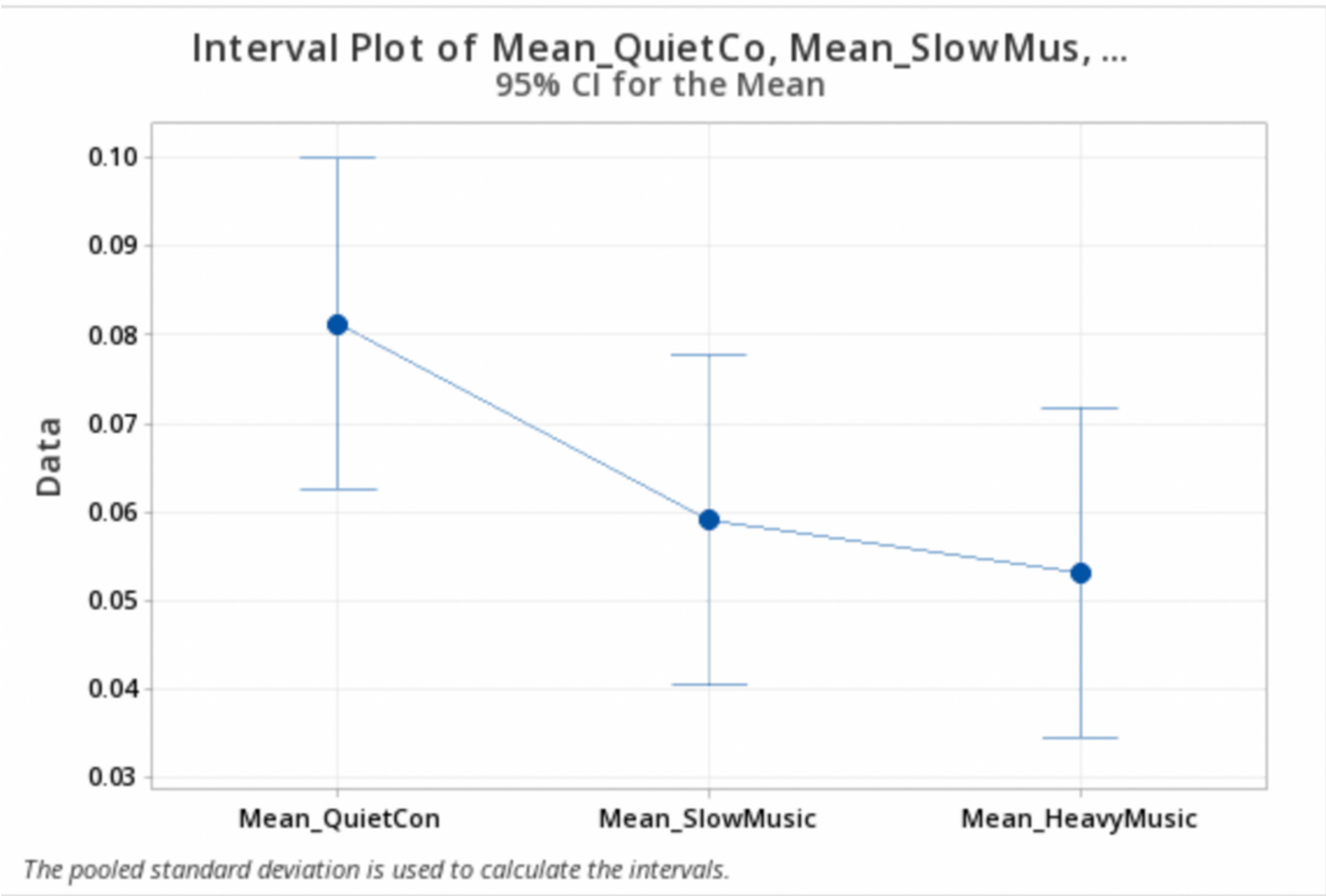
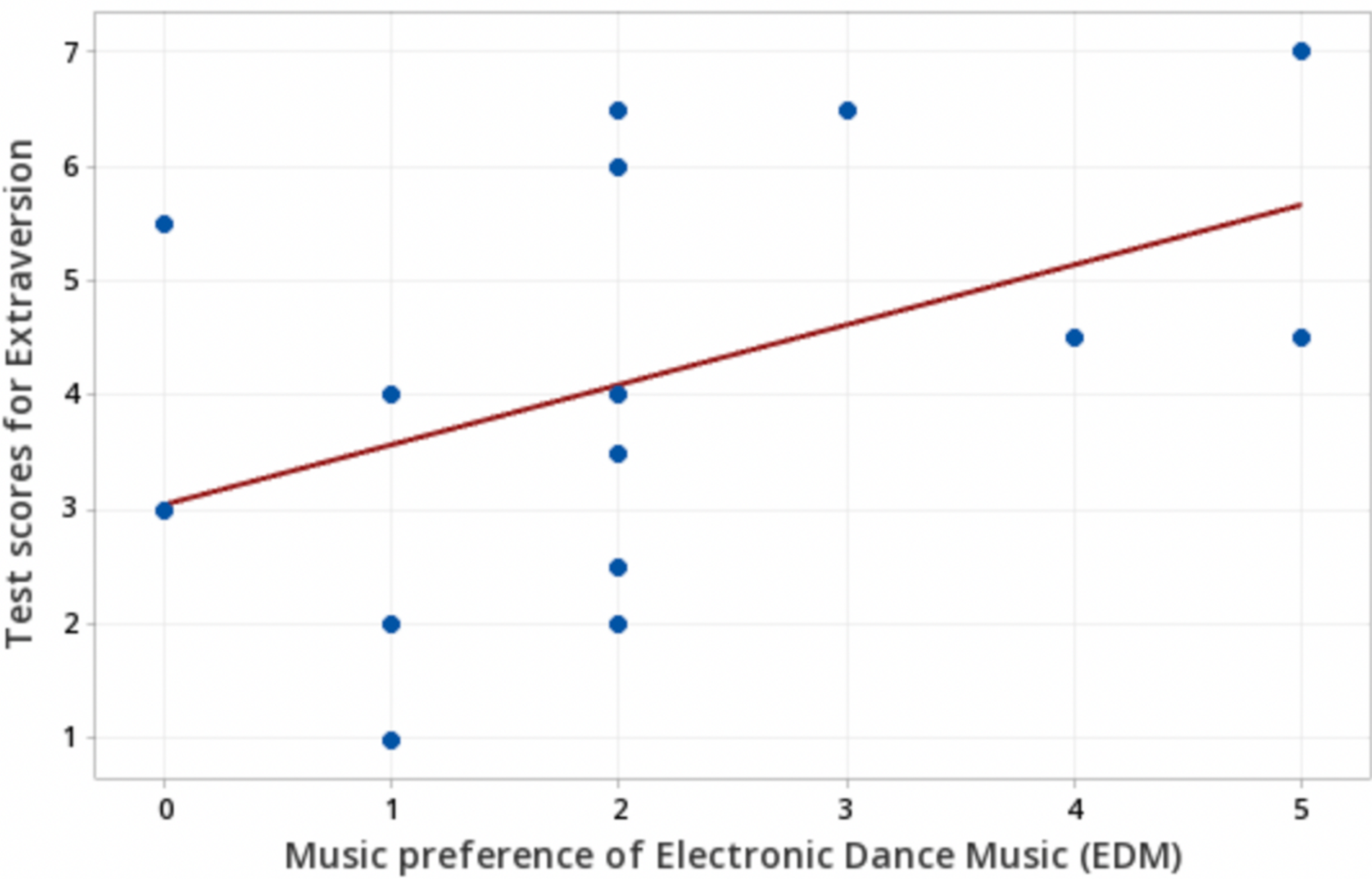
ANALYSIS

The ANOVA of the ability of participants in memorizing different sets of words under three musical conditions. The overall f-value of the ANOVA was 2.51 while the p-value was 0.088 indicating a very weak positive correlation.

Statistics

Variable	N	N*	Mean	SE Mean	StDev
Mean_QuietCon	26	0	0.08136	0.00808	0.04118
Mean_SlowMusic	26	0	0.05917	0.00960	0.04893
Mean_HeavyMusic	26	0	0.0533	0.0102	0.0523

Test score for Extraversion vs Music preference of Electronic Dance



REFERENCES

Nave, G., Minxha, J., Greenberg, D.M., Kosinski, M., Stillwell, D. & Rentfrow, J. (2018). Musical Preferences Predict Personality: Evidence from Active Listening and Facebook Likes. *Psychological Science*, 29(7), 1145-1158. <https://doi.org/10.1177/0956797618761659>

Rentfrow, P. J., & Gosling, S. D. (2003). The do re mi's of everyday life: The structure and personality correlates of music preferences. *Journal of Personality and Social Psychology*, 84, 1236-1256. <https://gosling.psy.utexas.edu/wp-content/uploads/2014/09/JPSP03musicdimensions.pdf>

Luchetti, M., Terracciano, A., Stephan, Y., Aschwanden, D., & Sutin, A. (2021). Personality traits and memory: A multilevel analysis across 27 countries from the survey of health, ageing and retirement in Europe. *Psychological Science*, 32(7), 1047–1057. <https://www.gwern.net/docs/psychology/2021-luchetti.pdf>

Birman, A. R., & Ferguson, C. J. (2022). Impact of Different Genres of Background Music on a Memory Test. *Journal of Individual Differences*, 43(4), 188–193. <https://doi.org/10.1027/1614-0001/a000371>

Chamorro-Premuzic, T., Fagan, P., & Furnham, A. (2010). Personality and Uses of Music as Predictors of Preferences for Music Consensually Classified as Happy, Sad, Complex, and Social. *Psychology of Aesthetics, Creativity, and the Arts*, 4(4), 205-213. [10.1037/a0019210](https://doi.org/10.1037/a0019210)

Zweigenhaft, R. L. (2008). A Do Re Mi Encore: A Closer Look at the Personality Correlates of Music Preferences. *Journal of Individual Differences*, 29(1), 45-55. [10.1027/1614-0001.29.1.45](https://doi.org/10.1027/1614-0001.29.1.45)