Oh-mman

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Research Question

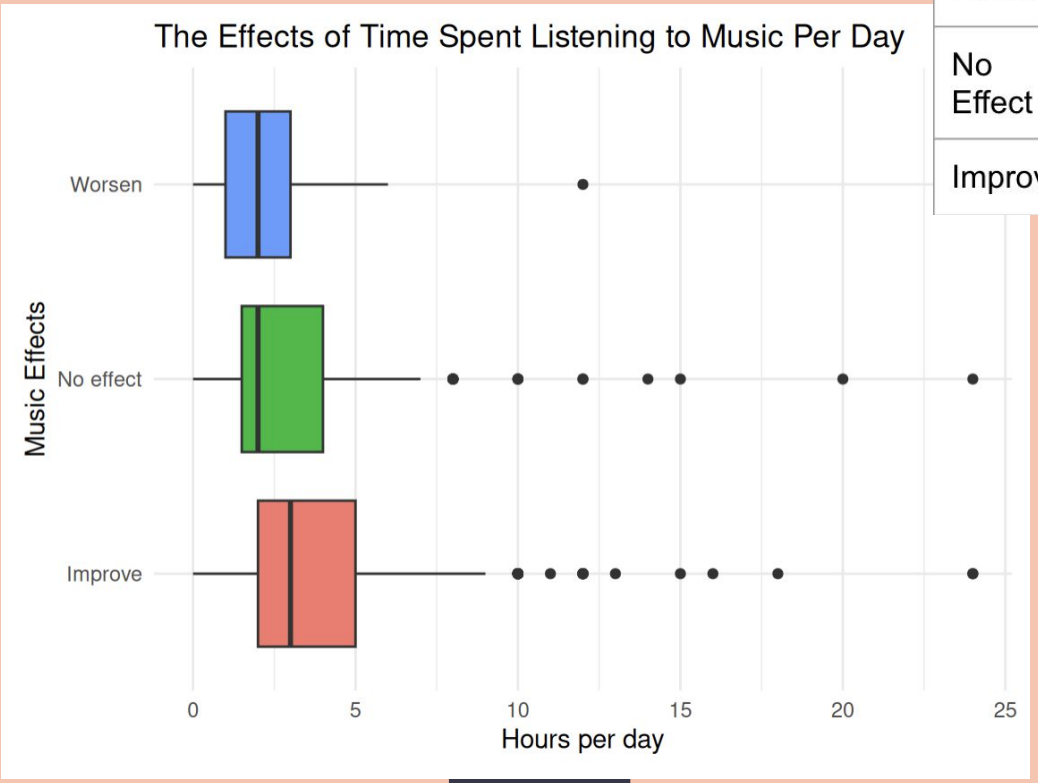
What is the relationship between the amount of time spent listening to music and positive mental health outcomes? How does this relationship vary by music genre?

Introduction

Music has often been associated with mental health through its ability to regulate emotions, influence brain chemistry, and social connections. In this investigation, we explored a dataset linking mental health and music, sourced from Kaggle and collected via a google form. We scoped in on how music is perceived and influences anxiety, depression, insomnia, and OCD.

Hypothesis

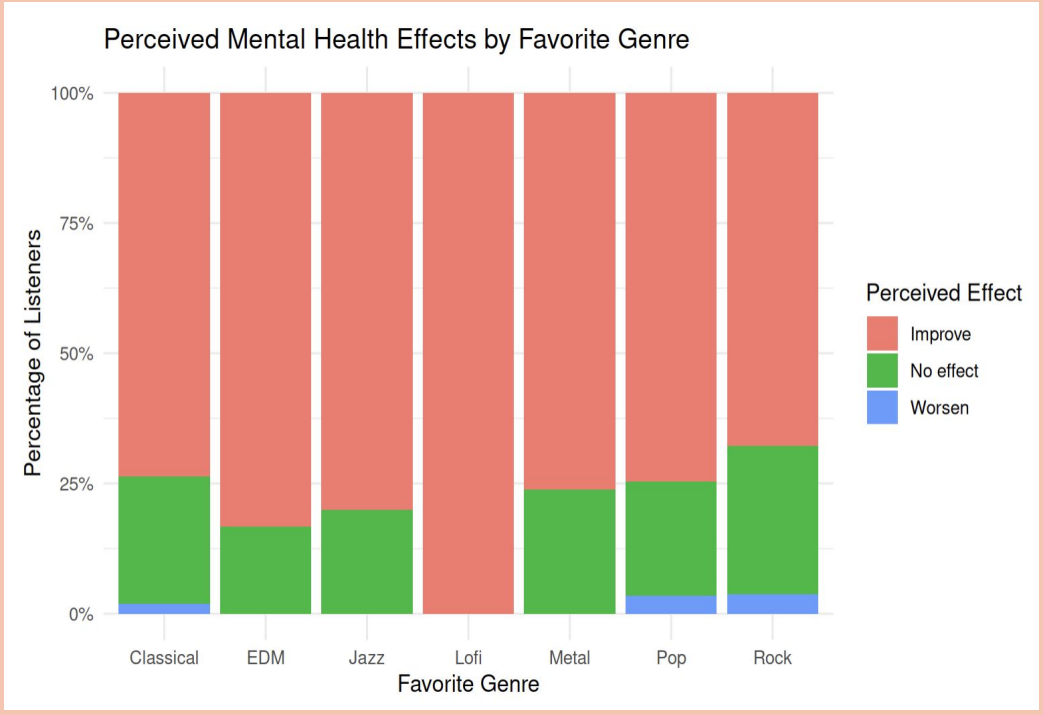
We predict that there will be a positive relationship between the amount of **time** someone spends listening to music and **positive mental health outcomes**. Meaning, the longer a person listens to music, the more improved their mental health will be. Moreover, we hypothesize that the music **genres** that will lead to more positive mental health outcomes are lo-fi, pop, and jazz.



Effects	Mean	Median
Worsen	2.765	2
No Effect	3.446	2
Improve	3.664	3

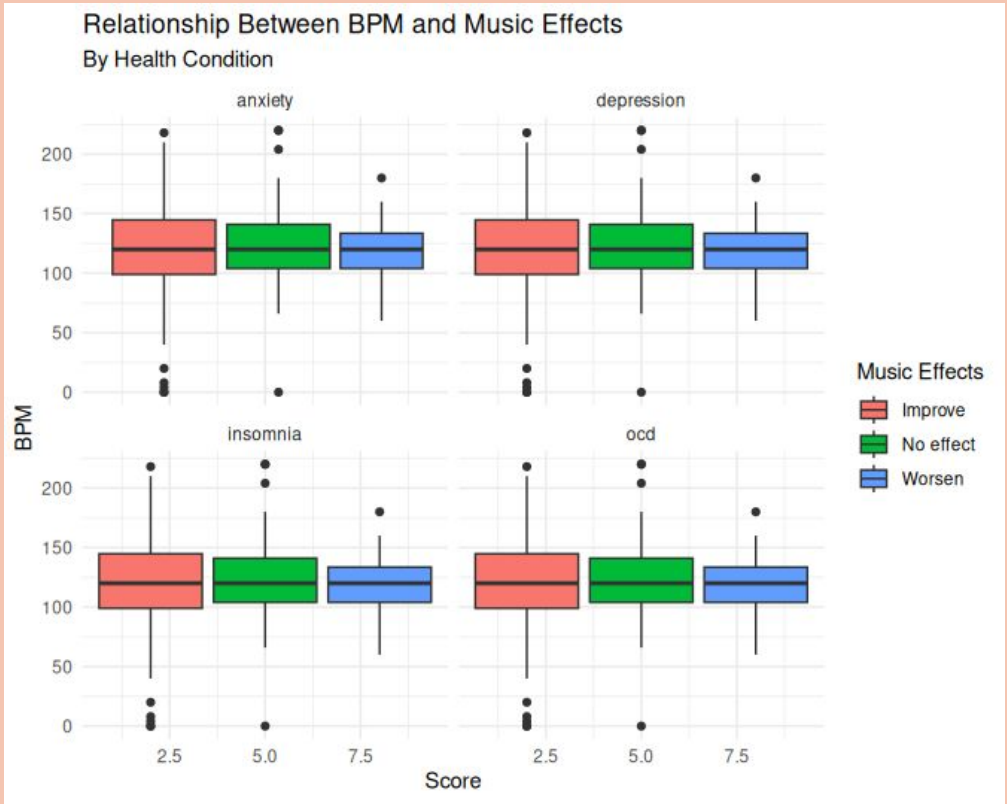
Analysis

- All groups are **right-skewed with high outliers**
- **“Improve” has highest mean & median**
- Greater variability in **“improve” and “no effect”**
- Suggests **weak positive relationship** between listening time & mental health



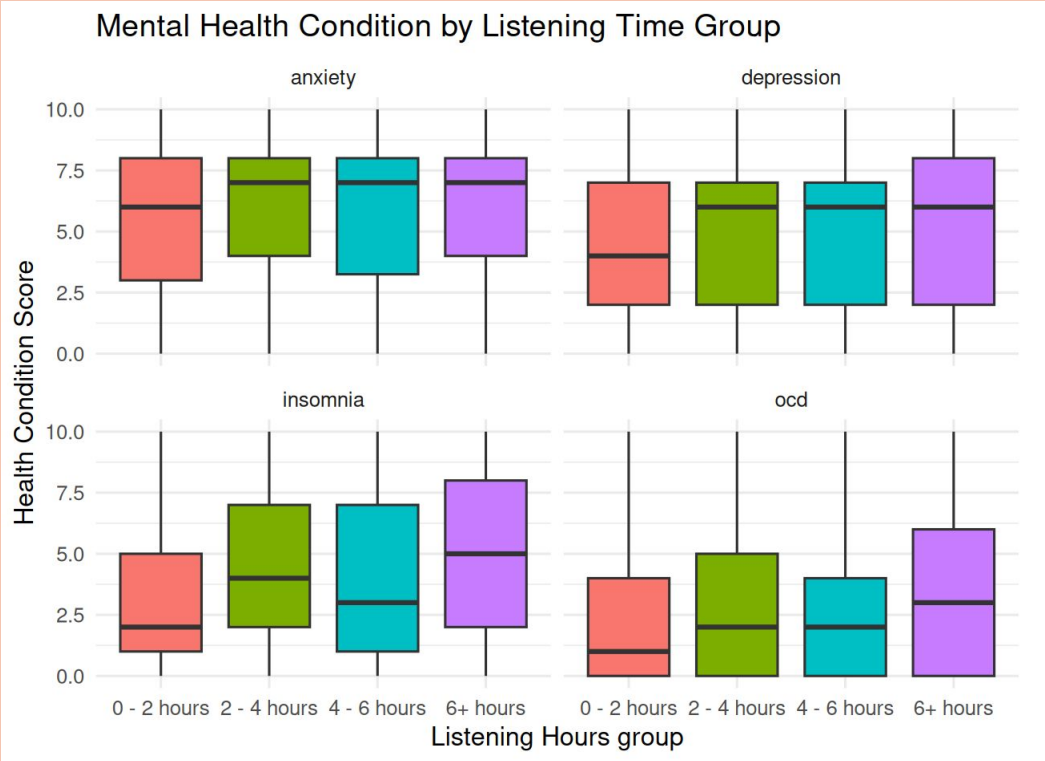
Analysis

- Most genres show **similar distributions**
- Majority report **improved mental health (74%)**
- Very few report **negative effects (2%)**
- **Lofi shows only positive effects**
- Overall: **genre has minimal impact**



Analysis

- Distributions are **mostly symmetrical**
- Median BPM ≈ **120 across all groups**
- **“Improve” shows greatest variability**
- Weak relationship between **BPM & mental health**



Analysis

- **Anxiety & depression:** no clear trend
- **Insomnia:** slight increase with more listening
- **OCD:** variable but generally low scores
- Overall: **listening time has limited impact**, except possible link to insomnia

Conclusions

Limitations:

- Survey, self-reported data can be unreliable
- The score for each mental condition is not standardized

Revisiting Hypothesis:

- Weak positive correlation between **time** spend listening to music and **music effects** (improve, no effect, worsen).
- No correlation between **bpm** and **music effects** for any health condition
- *All* the **genres** studied were shown to mainly have a positive perceived effect on mental health, not just Lofi, Pop and Jazz. However, Lofi was the only genre to have only positive effect, partially supporting our hypothesis.
- Listening time has minimal impact on anxiety and depression, but may be associated with increased insomnia, although the relationships appear weak

Thank you!