



Oh-mman

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The background is a light beige color with various musical-themed illustrations. On the left, there is a large, dark blue silhouette of a French horn. Above it, a red, abstract, teardrop-shaped graphic is connected to a thin black line that loops around a pair of orange musical notes. On the right, there is a large, bright yellow and orange abstract shape, possibly representing a sun or a flame, with several thin black curved lines above it. Below this, there are white and black rectangular shapes resembling piano keys. At the bottom right, a dark blue silhouette of a grand piano is partially visible, with a red curved shape above it. At the bottom left, another orange musical note is positioned above a set of thin black curved lines representing a musical staff.

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?

The background features several stylized musical elements: a large yellow and red abstract shape in the top left, a red saxophone in the top right, a yellow crescent moon in the bottom right, and a dark blue abstract shape in the bottom left. A treble clef is connected to the saxophone by a thin black line. A musical note and a piano key are also visible on the left side.

Introduction

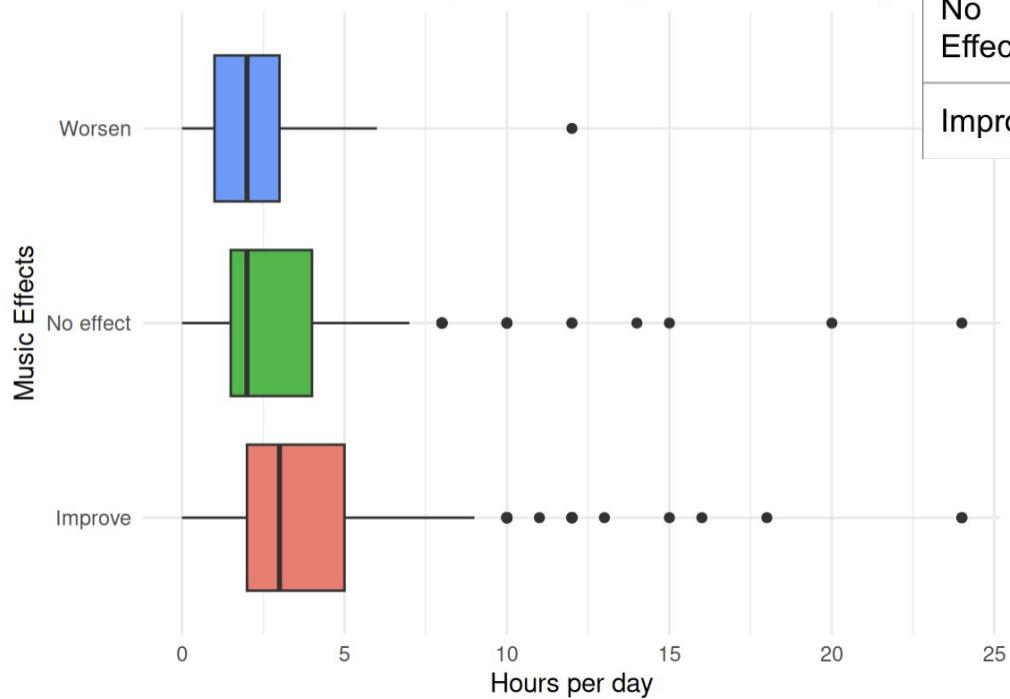
Music has often been associated with mental health through its ability to regulate emotions, influence brain chemistry, and social connections. In this investigation, we explored a dataset linking mental health and music, sourced from Kaggle and collected via a google form. We scoped in on how music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



The Effects of Time Spent Listening to Music Per Day

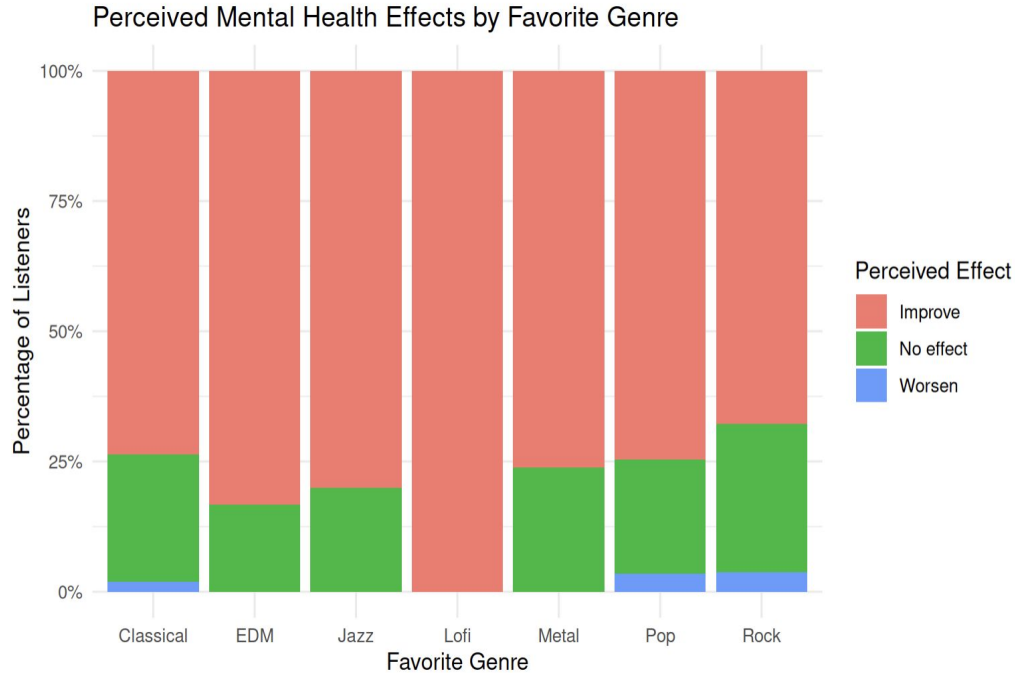


Effects	Mean	Median
Worsen	2.765	2
No Effect	3.446	2
Improve	3.664	3

Analysis

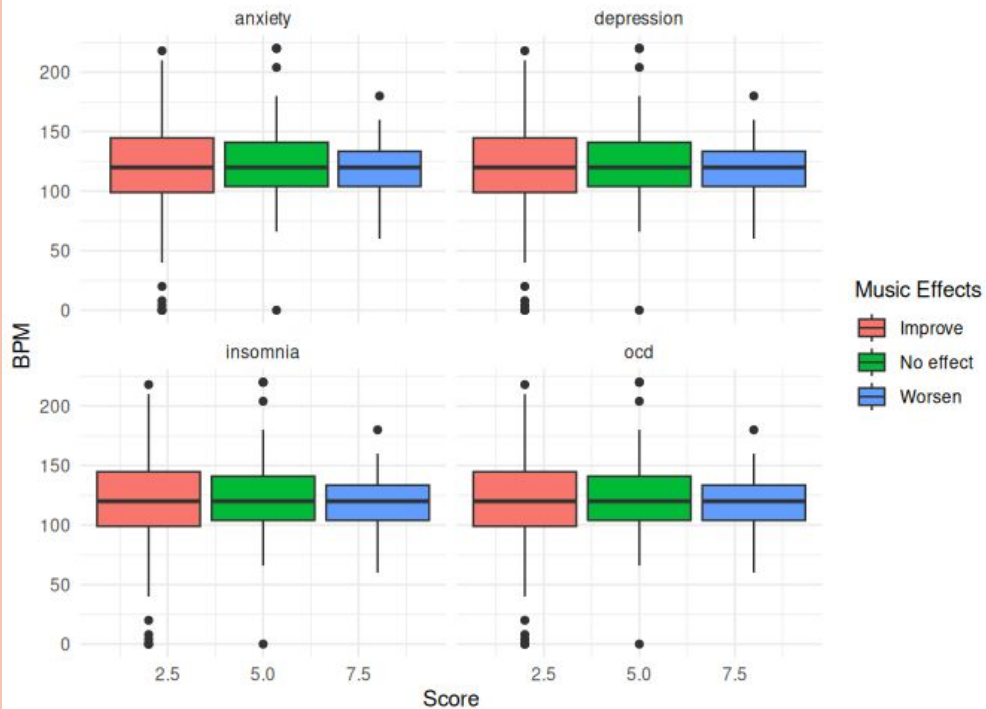
- All groups are **right-skewed with high outliers**
- **“Improve” has highest mean & median**
- Greater variability in **“improve” and “no effect”**
- Suggests **weak positive relationship** between listening time & mental health

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**

Relationship Between BPM and Music Effects
By Health Condition

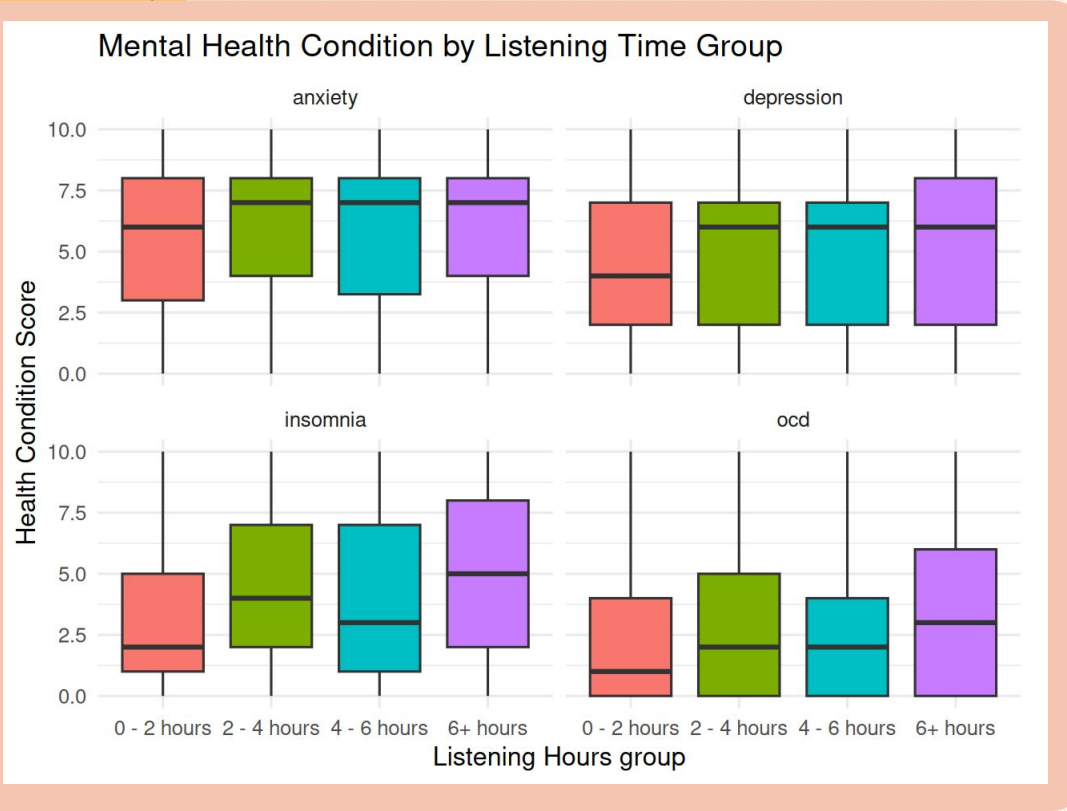


Analysis

- Distributions are **mostly symmetrical**
- Median BPM \approx **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

A collage of musical instruments and notes in red, yellow, and dark blue on a light beige background. The instruments include a trumpet, a saxophone, a clarinet, and a bass clef. There are also musical notes and a treble clef. The text "Thank you!" is centered in a bold, dark blue font.

**Thank
you!**