**INTRO**

Group 10. Database: Effects of Music on Mental Health

Since the beginning of this project, we knew we wanted to analyze data related to mental health. We think this issue is important and impacts our daily lives, and we all enjoy listening to music. To have an overview of our project, we managed over 700 respondents and included 16 music genres and four mental health disorders, where most of the results were obtained online. To be more precise, we also include a quick shorthand with some vocabulary in case the audience is not familiar with some definitions of some uncommon music genres.

**Which genres are most beneficial or detrimental to mental health status?**

After analyzing the results for the top three favorite genres, Rock, Pop, and Metal, we wanted to explore how the listeners perceived these genres' effects on their mental health. We used the results for Improvement, no effect, and worsen per genre. We started by creating a new Data frame with Hours per day, fav genre, and Music effects to get the value counts of how many votes each genre received for improvement; we grouped that by fav genre and ensure a more objective view of the results, we filtered the data by genres that received at least 26 votes and above. We get the percentage per category to ensure a clearer view of the results on our graph. This process allowed us to focus on the genres that had a significant impact, such as Hip-Hop, EDM, and Pop, and drop Latin, Gospel, and Jazz, which received lower interaction. Through this analysis, we can conclude that the genres with the most favorable results are hip-hop, EDM, and metal. While R&B, Rock, and Video Game Music received many positive votes but also significant no-effect rankings.

A graph with pink bars and numbers

Description automatically generated

Figure 1

Continuing with our analysis, we wanted to determine whether there was any correlation between the time spent listening to music daily and its impact on mental health. Our initial hypothesis was there is a positive correlation between the hours spent daily and the effects of music. However, contrary to this, we found that the fewer hours spent listening to music, the higher the rate of improvement. Above 6 hours, no evident correlation existed between the effects and the hours per day. The highest rate of improvement was registered by users who spent 2-3 hours/day listening to music. These findings, as shown in the graph, are free from significant outliers, further reinforcing the validity of our research.

A graph of a number of people

Description automatically generated with medium confidence

Figure 2

**Conclusion**

Based on the different analyses of our data and many possible correlations, we could conclude that listening to music is likely to improve mental health, and it is recommended to do it at least 2-3 hours/day. The genres with the highest improvement are Hip hop, EDM, Metal, Pop, and Classical, where the users perceived the most positive results. On the other hand, as the leaderboard below shows, for most people, the improvement results were noticeable in 20-year-olds and younger. However, it is important to mention that those are unreliable results due to how the information was collected. Where the main source was online, and many limitations conflicted with the diversity of the responses, as our limitations section explains.

A screenshot of a number

Description automatically generatedA pink circle with white text

Description automatically generated

Figure 4

Figure 3

Works Cited

Rasgaitis, Catherine. “Music & Mental Health Eda.” Kaggle, Kaggle, 18 Dec. 2022, www.kaggle.com/code/catherinerasgaitis/music-mental-health-eda.

Zimmerman, Mark. “Obsessive-Compulsive Disorder (OCD) - Psychiatric Disorders.” *Merck Manual Professional Edition*, Sept. 2023, www.merckmanuals.com/professional/psychiatric-disorders/obsessive-compulsive-and-related-disorders/obsessive-compulsive-disorder-ocd.