

## **1. Introduction:**

This document provides an overview of the data analysis process used for the music and mental health project. It outlines the project objectives, the data used, the data sources, the data cleaning process, and the methodology employed to analyze the data.

## **2. Project Objectives:**

The objective of this data analysis is to answer the following questions:

- What are the most popular streaming service used from the survey?
- What is the most favorite genre listened to by the respondents?
- What age group responded in the survey?
- What is the effect of music on mental health?
- How long do they listen to music?

## **3. Data Sources:**

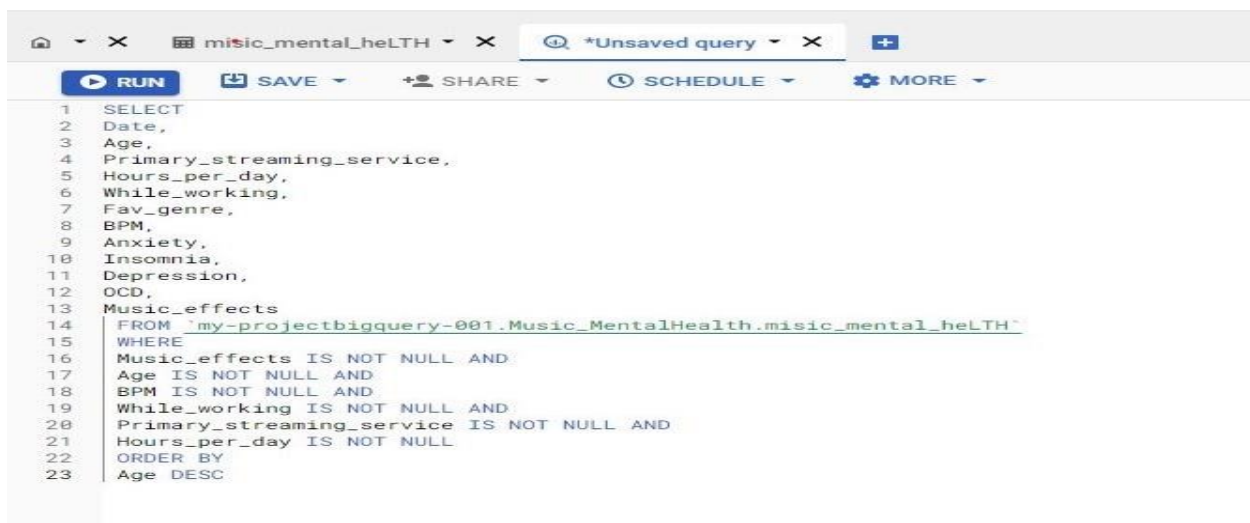
The dataset used in this project was collected from Kaggle. The dataset was a survey Managed, collected, and uploaded by Catherinerasgaitis. This data contains information about how people listen to music, their health condition i.e., insomnia, depression, OCD, and BMP, the genre they listen to, how they stream their music, and how music affects their mental health.

## **4. Methods:**

The data analysis was conducted using SQL queries and Tableau for visualization. The queries used to answer the objectives were designed to filter out missing and erroneous data and transform data types.

### **PROCESS IN CLEANING THE DATA**

Using SQL to pull the needed column, removing blank cells and sorting by age



```
1 SELECT
2 Date,
3 Age,
4 Primary_streaming_service,
5 Hours_per_day,
6 While_working,
7 Fav_genre,
8 BPM,
9 Anxiety,
10 Insomnia,
11 Depression,
12 OCD,
13 Music_effects
14 FROM `my-projectbigquery-001.Music_MentalHealth.misic_mental_heLTH`
15 WHERE
16 Music_effects IS NOT NULL AND
17 Age IS NOT NULL AND
18 BPM IS NOT NULL AND
19 While_working IS NOT NULL AND
20 Primary_streaming_service IS NOT NULL AND
21 Hours_per_day IS NOT NULL
22 ORDER BY
23 Age DESC
```

The result was downloaded and exported into an excel sheet

**Removing duplicates:** This was done to ensure that data integrity is maintained and that the results from the analysis are accurate and precise.

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Date	Age	Primary stream	Hours per day	While working	Fav. genre	BPM	Anxiety	Insomnia	Depression	OCD	Music effects						
2	2022-09-28	89	Spotify	24	TRUE	Rap	143	0	0	0	0	0 No effect						
3	2022-09-02	80	I do not use a	3	TRUE	Classical	122	7	9	3	2	2 Improve						
4	2022-09-01	74	I do not use a	1	FALSE	Pop	129	4	1	2	0	0 Improve						
5	2022-08-30	73	Pandora	3	TRUE	R&B	4				1	1 Improve						
6	2022-08-30	72	Spotify	6	TRUE	Rock	77				2	2 Improve						
7	2022-09-01	70	I do not use a	2	TRUE	Country	88				1	1 Improve						
8	2022-08-30	69	Pandora	4	TRUE	Classical	72				0	0 Improve						
9	2022-09-04	68	Pandora	1	TRUE	Gospel	8				0	0 Improve						
10	2022-09-01	67	Other streamin	4	TRUE	Rock	146	7	7	6	4	4 Improve						
11	2022-09-02	65	Apple Music	6	TRUE	R&B	146	3	0	5	2	2 No effect						
12	2022-08-28	64	I do not use a	4	TRUE	Rock	200	4	2	4	1	1 Improve						
13	2022-09-01	63	Spotify	2	TRUE	Rock	133	5	6	4	2	2 Improve						
14	2022-09-02	63	YouTube Musi	8	TRUE	Rock	70	2	2	1	2	2 Improve						
15	2022-09-01	61	Pandora	2	TRUE	Rock	94	2	2	2	0	0 Improve						
16	2022-08-27	61	YouTube Musi	2.5	TRUE	Jazz	84	9	3	7	3	3 Improve						
17	2022-08-28	60	Pandora	2	TRUE	Gospel	119	3	2	0	0	0 Improve						
18	2022-09-02	60	Spotify	1	FALSE	Rock	129	3	5	2	0	0 No effect						
19	2022-09-01	60	YouTube Musi	2	TRUE	Rock	132	4	2	4	0	0 Improve						
20	2022-08-29	59	YouTube Musi	2	TRUE	Pop	103	1	3	1	0	0 Improve						
21	2022-09-06	59	Other streamin	1	FALSE	Rock	79	1	0	0	1	1 Improve						
22	2022-09-01	58	YouTube Musi	1	TRUE	Classical	80	0	2	0	1	1 Improve						
23	2022-09-01	58	Other streamin	3	TRUE	Hip hop	127	4	8	6	1	1 Improve						

Ready Accessibility: Good to go Average: 206586.6795 Count: 7476 Sum: 1027975317

As we can see here there are no duplicates.

**Removing Blank Cells:** This is also done to ensure data integrity is maintained and remove all forms of data inconsistency in data to avoid deriving irrelevant/useless insights.

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Date	Age	Primary str	Hours per	While work	Fav. genre	BPM	Anxiety	Insomnia	Depression	OCD	Music, effec						
2	2022-09-28	89	Spotify	24	TRUE	Rap	143	0	0	0	0	0 No effect						
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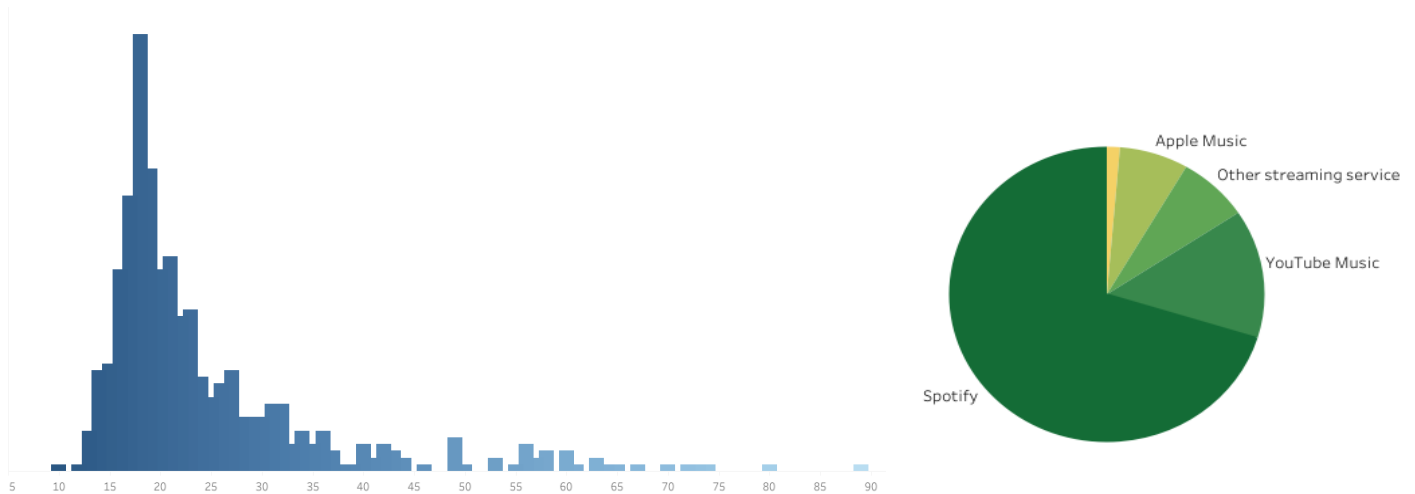
We can see from here that after creating a filter to check for the rows which are empty in the age column, there are no blank cells. Therefore, this is where we end the cleaning process.

## 5. Analysis:

The data was analyzed using Tableau to create an interactive visualization and dashboard.

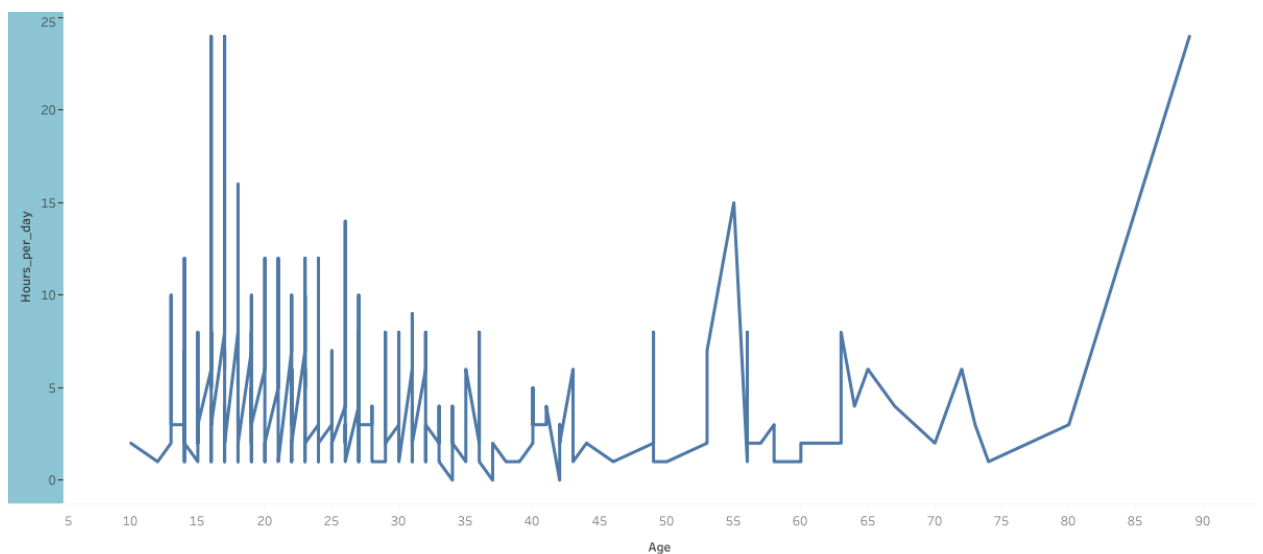
## ANALYSIS AND VISUALIZATION

Firstly, we want to know the age of the respondents as well as the primary streaming service use.



This visualize shows most of the respondents are between the age of 15-21. The least popular streaming service is pandora while the most popular is Spotify. Unlike apple music, Spotify is a free streaming service. majority of the respondents are in their teens therefore they might not be able to pay for a streaming service which make Spotify a good choice for them.

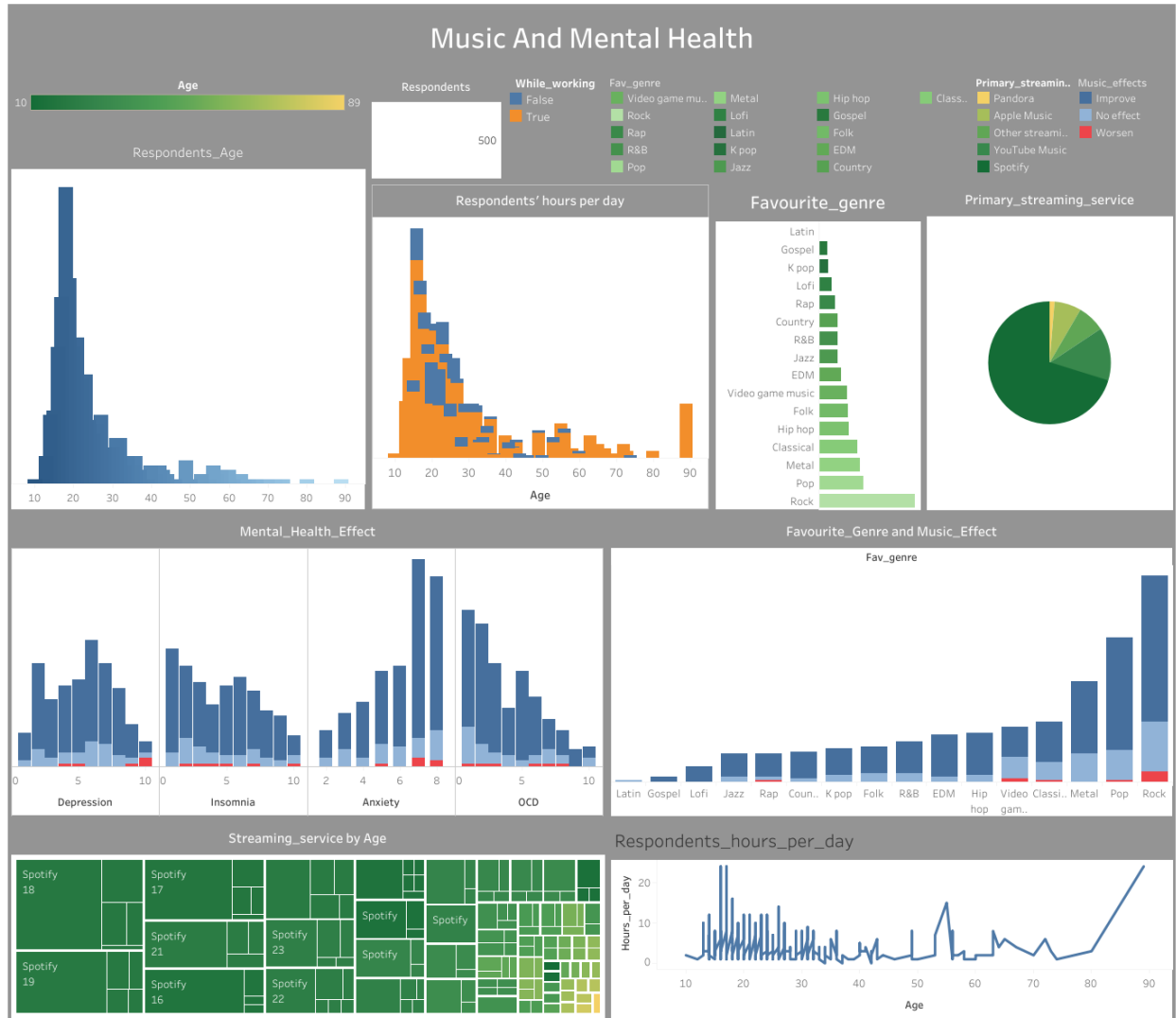
Next, we want to know how the respondents listen to music



The above viz shows how respondents of different age listen to music everyday

## Results:

The results of the analysis showed that music have a significant positive impact on human mental health and wellbeing.



Goto

[https://public.tableau.com/views/mental\\_health\\_16741601522030/Dashboard1?:language=en-US&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/mental_health_16741601522030/Dashboard1?:language=en-US&:display_count=n&:origin=viz_share_link) to explore the dashboard

## Conclusion and Suggestion

This document provides an overview of the data analysis process used for the music and mental health project. The data was cleaned and analyzed using SQL and Excel for further cleaning, and the results showed that music had a significant positive impact on human mental health and wellbeing. The result indicated that music therapy works and I will advise everyone to incorporate the habit of listening to music.