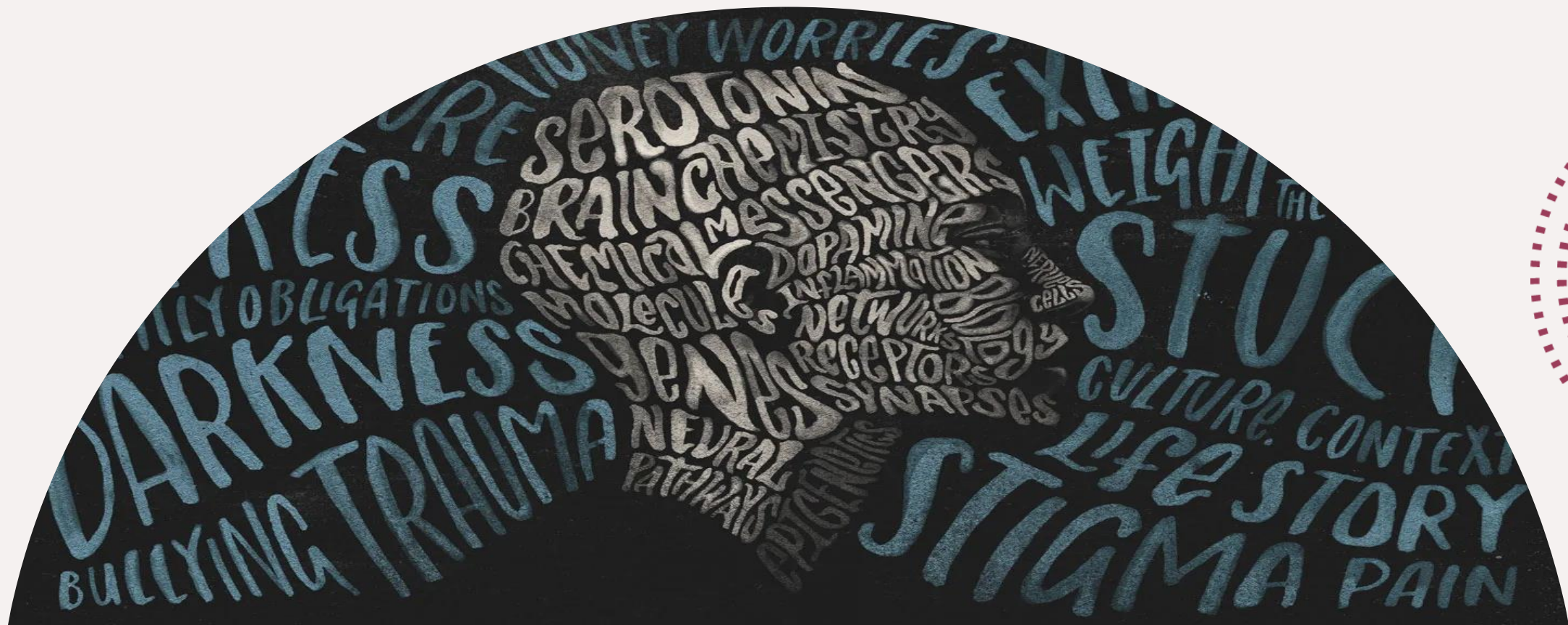




Student Mental Health Insights

Geetanjali





This project focuses on analyzing a dataset of students to understand the factors contributing to **depression**, including academic pressure, study habits, sleep duration, financial stress, and family history of mental illness. The analysis uses **Excel** for data cleaning and visualization, while **SQL** is employed for querying and deriving insights from the dataset.

Introduction

Purpose of the Study:

Investigating factors that influence student depression, such as academic pressure, sleep duration, study habits, financial stress, and family history of mental illness.

Methodology:

- **Data Cleaning:** Using Excel to prepare the data for analysis.
- **Data Analysis:** SQL queries to extract insights based on various factors.

Tools Used:

- Excel
- SQL



Data Overview

Dataset Name: Student Depression Dataset

• Columns:

- **Age:** Age of the student
- **Gender:** Male/Female/Other
- **Academic Pressure:** Rating of academic pressure (scale-based)
- **Study Satisfaction:** Rating of study satisfaction (scale-based)
- **Sleep Duration:** Hours of sleep per day
- **Dietary Habits:** Type of diet (e.g., vegetarian, non-vegetarian, etc.)
- **Have you ever had suicidal thoughts?:** Yes/No
- **Study Hours:** Number of hours spent on studying per day
- **Financial Stress:** Level of financial stress
- **Family History of Mental Illness:** Yes/No
- **Depression:** Whether the student experiences depression (Yes/No)

	A	B	C	D	E	F	G	H	I	J	K
1	Gender	Age	Academic Pressure	Study Satisfaction	Sleep Duration	Dietary Habits	Have you ever had suicidal thoughts ?	Study Hours	Financial Stress	Family History of Mental Illness	Depression
2	Male	28		2	4 7-8 hours	Moderate	Yes	9	2	Yes	No
3	Male	28		4	5 5-6 hours	Healthy	Yes	7	1	Yes	No
4	Male	25		1	3 5-6 hours	Unhealthy	Yes	10	4	No	Yes
5	Male	23		1	4 More than 8 hours	Unhealthy	Yes	7	2	Yes	No
6	Female	31		1	5 More than 8 hours	Healthy	Yes	4	2	Yes	No
7	Male	19		4	4 5-6 hours	Unhealthy	Yes	1	4	Yes	Yes
8	Female	34		4	2 More than 8 hours	Moderate	Yes	6	2	No	Yes
9	Female	20		4	1 More than 8 hours	Healthy	Yes	3	4	Yes	Yes
10	Female	33		1	4 More than 8 hours	Moderate	No	10	3	No	No
11	Male	33		4	3 Less than 5 hours	Unhealthy	Yes	10	1	No	Yes
12	Female	31		5	4 5-6 hours	Healthy	Yes	6	4	No	Yes
13	Male	24		2	1 7-8 hours	Unhealthy	Yes	11	5	No	Yes
14	Female	23		5	5 Less than 5 hours	Unhealthy	Yes	2	1	Yes	Yes
15	Male	25		1	1 5-6 hours	Moderate	Yes	12	3	Yes	Yes
16	Male	21		5	1 More than 8 hours	Unhealthy	Yes	3	5	Yes	Yes
17	Male	28		5	3 5-6 hours	Healthy	Yes	8	3	Yes	Yes
18	Male	23		5	2 More than 8 hours	Moderate	No	10	4	No	Yes
19	Female	23		1	3 Less than 5 hours	Healthy	Yes	0	3	No	No
20	Female	20		5	5 More than 8 hours	Unhealthy	Yes	2	5	No	Yes
21	Male	29		4	3 More than 8 hours	Unhealthy	Yes	1	3	No	Yes
22	Male	31		2	3 More than 8 hours	Unhealthy	No	3	3	Yes	No
23	Male	24		3	4 More than 8 hours	Healthy	Yes	1	3	No	No
24	Male	31		2	4 More than 8 hours	Unhealthy	No	10	1	No	No
25	Female	33		3	2 7-8 hours	Moderate	No	11	5	Yes	No
26	Female	33		2	3 7-8 hours	Moderate	Yes	12	5	Yes	Yes
27	Male	31		2	2 7-8 hours	Healthy	No	2	4	Yes	No
28	Male	30		3	4 7-8 hours	Moderate	Yes	0	2	Yes	No
29	Male	21		5	3 7-8 hours	Unhealthy	No	6	4	Yes	Yes
30	Female	29		3	5 Less than 5 hours	Moderate	Yes	4	3	Yes	Yes

Dashboard



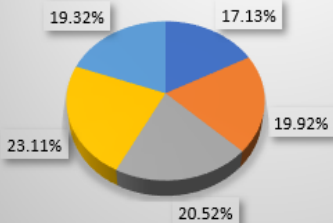
STUDENT DEPRESSION AND LIFESTYLE INSIGHTS DASHBOARD

Count of Academic Pressure

Academic Pressure Percentage by Study Satisfaction

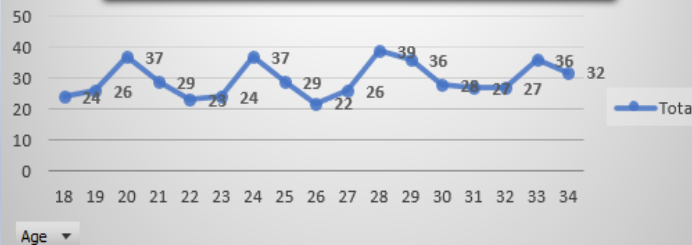
Study Satisfaction

- 1
- 2
- 3
- 4
- 5



Count of Have you ever had suicidal thoughts ?

Trend of Suicidal Thoughts Count

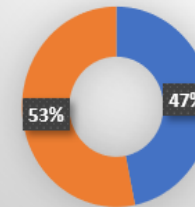


Count of Depression

Depression Percentage by Gender

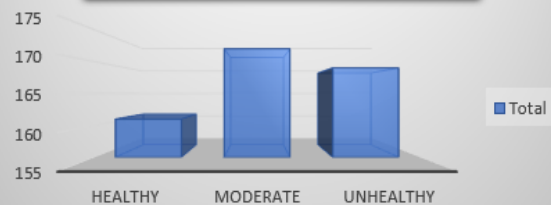
Gender

- Female
- Male



Count of Family History of Mental Illness

Family History of Mental Illness and Dietary Habits

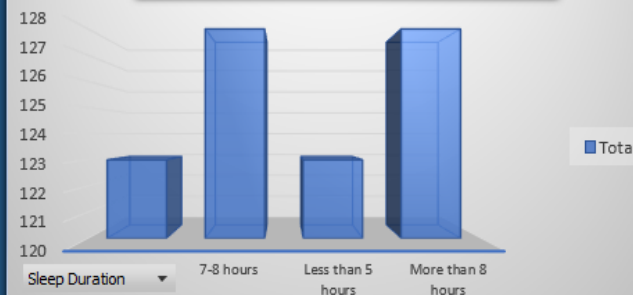


Dietary Habits

Gender

Count of Gender

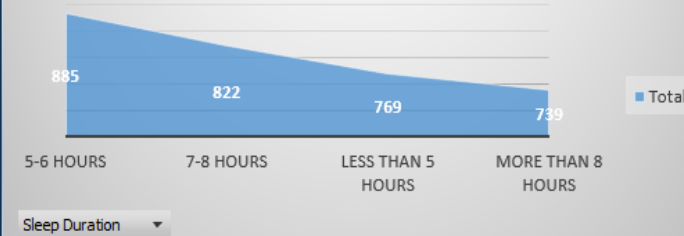
Count Distribution of Sleep Duration by Gender



Sleep Duration

Sum of Study Hours

Sum of Study Hours by Sleep Duration



Sleep Duration

Age

- 18
- 19
- 20
- 21

Academic P...

- 1
- 2
- 3
- 4
- 5

Study S...

- 1
- 2
- 3
- 4
- 5

Family Histo...

- No
- Yes

Gender

- Female
- Male

Sleep Duration

- 5-6 hours
- 7-8 hours
- Less than 5 hours
- More than 8 hours

Key Insights from the Data

The purpose of this analysis is to examine various factors contributing to students' mental health, academic well-being, and study habits. The key variables studied include **academic pressure**, **depression**, **suicidal thoughts**, **sleep duration**, **study hours**, and **dietary habits**.

Core Analysis Questions:

- Academic Pressure Percentage by Study Satisfaction:** Examining the Study Satisfaction -based distribution of academic pressure levels among students.
- Trend of Suicidal Thoughts Count:** Tracking the trend of students who have experienced suicidal thoughts over time.
- Depression Percentage by Gender:** Analyzing how depression cases are distributed between genders.
- Family History of Mental Illness and Dietary Habits:** Categorizing students' family mental illness history in relation to their dietary habits.
- Count Distribution of Sleep Duration by Gender:** Investigating how sleep duration varies across different genders.
- Count of Study Hours by Sleep Duration:** Understanding how study hours correlate with different sleep duration categories.



Excel Analysis Insights:



- **Academic Pressure Percentage by Study Satisfaction** : Academic pressure levels are distributed across the categories with 23.11% of students reporting the highest level of pressure (Level 4), followed by 20.52% at Level 3, 19.92% at Level 2, 19.32% at Level 5, and 17.13% at Level 1.
- **Trend of Suicidal Thoughts Count by Age** :Age 28 has the highest count of students reporting suicidal thoughts.
- **Depression Percentage by Gender**: Depression cases are slightly higher among males (53.19%) compared to females (46.81%), indicating a gender disparity in depression rates.
- **Family History of Mental Illness and Dietary Habits** : The majority of students with a family history of mental illness follow a **moderate** dietary habit (172), followed by **unhealthy** (169) and **healthy** (161), indicating a possible link between family history and dietary habits.
- **Count Distribution of Sleep Duration by Gender** : The majority of students sleep between **7-8 hours** (128), followed by **5-6 hours** and **less than 5 hours** (123 each), with an equal number of students sleeping **more than 8 hours** (128), highlighting varied sleep patterns across genders.
- **Sum of Study Hours by Sleep Duration**: Students who sleep **5-6 hours** have the highest total study hours (**885**), followed by those who sleep **7-8 hours** (**822**), while those who sleep **less than 5 hours** and **more than 8 hours** have lower total study hours (**769** and **739**, respectively).

Introduction to SQL Analysis:

- After visualizing the overall trends and insights in the dashboard, the next step involves drilling deeper into the data using SQL queries.
- SQL was used to aggregate, summarize, and filter data, providing a more detailed understanding of various factors influencing depression, academic pressure, study habits, sleep duration, and more.
- The following SQL queries were written to answer key questions and extract meaningful insights related to the dataset.



Average Study Hours by Gender

Question: What is the average study hours grouped by gender?

Purpose:

- To analyze how study habits differ between genders by calculating the average number of study hours for each group.

```
SELECT Gender, AVG('Study Hours') AS Avg_study_Duration  
FROM student_depression  
GROUP BY Gender;
```

Result Grid			Filter Rows:
	Gender	Avg_study_Duration	
▶	Male	6.5431	
	Female	6.2468	

Family History of Mental Illness by Dietary Habits

Question : How many students with a family history of mental illness are grouped by their dietary habits?

Purpose:

To explore the relationship between family history of mental illness and dietary habits among students.

```
SELECT `Dietary Habits`, COUNT(*) AS Count_Students  
FROM student_depression  
WHERE `Family History of Mental Illness` = 'Yes'  
GROUP BY `Dietary Habits`;
```

	Dietary Habits	Count_Students
►	Moderate	77
	Healthy	82
	Unhealthy	78

Depression Percentage by Gender

Question: What is the percentage of students who experience depression grouped by gender?

Purpose:

- To analyze the proportion of depression cases for each gender.

```
SELECT Gender,  
       SUM(CASE WHEN Depression = 'Yes' THEN 1 ELSE 0 END) * 100.0 / COUNT(*) AS Depression_Percentage  
FROM student_depression  
GROUP BY Gender;
```

	Gender	Depression_Percentage
▶	Male	51.68539
	Female	48.51064

Depression by Financial Stress

Question: What is the number of students with depression in each financial stress category?

Purpose:

- To analyze the relationship between financial stress levels and depression among students.

```
SELECT `Financial Stress`,  
       COUNT(*) AS Total_Students,  
       SUM(CASE WHEN Depression = 'Yes' THEN 1 ELSE 0 END) AS Depressed_Students  
FROM student_depression  
GROUP BY `Financial Stress`  
order by `Financial Stress` ;
```

	Financial Stress	Total_Students	Depressed_Students
▶	1	110	34
	2	102	39
	3	100	52
	4	94	59
	5	96	68

SQL Analysis Insights:



Average Study Hours by Gender:

- Male students spend an average of [6.54] hours, while female students spend an average of [6.24] hours studying.

Family History of Mental Illness and Dietary Habits Insight:

- Among students with a family history of mental illness, **Healthy dietary habits** are most common (**82 students**), followed by **Unhealthy (78)** and **Moderate** habits (**77**).

Depression Percentage by Gender Insight:

- Depression cases are slightly higher among **males (53.19%)** compared to **females (46.81%)**.

Number of Students with Depression by Financial Stress Category Insight:

- The highest number of depression cases (68) is observed in **Financial Stress Category 5**, while the lowest (34) is in **Category 1**.

Recommendation

1

2



Actionable Recommendations

- **Addressing Academic Pressure:** Conduct gender-specific workshops to help manage severe academic pressure.
- **Mental Health Awareness:** Implement awareness and counseling programs for students with family histories of mental illness and poor dietary habits.
- **Encouraging Balanced Sleep Habits:** Promote healthy sleep schedules to improve both study efficiency and mental well-being.
- **Financial Stress Support:** Provide resources like counseling or financial aid to assist students struggling with financial stress.

Thank you

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