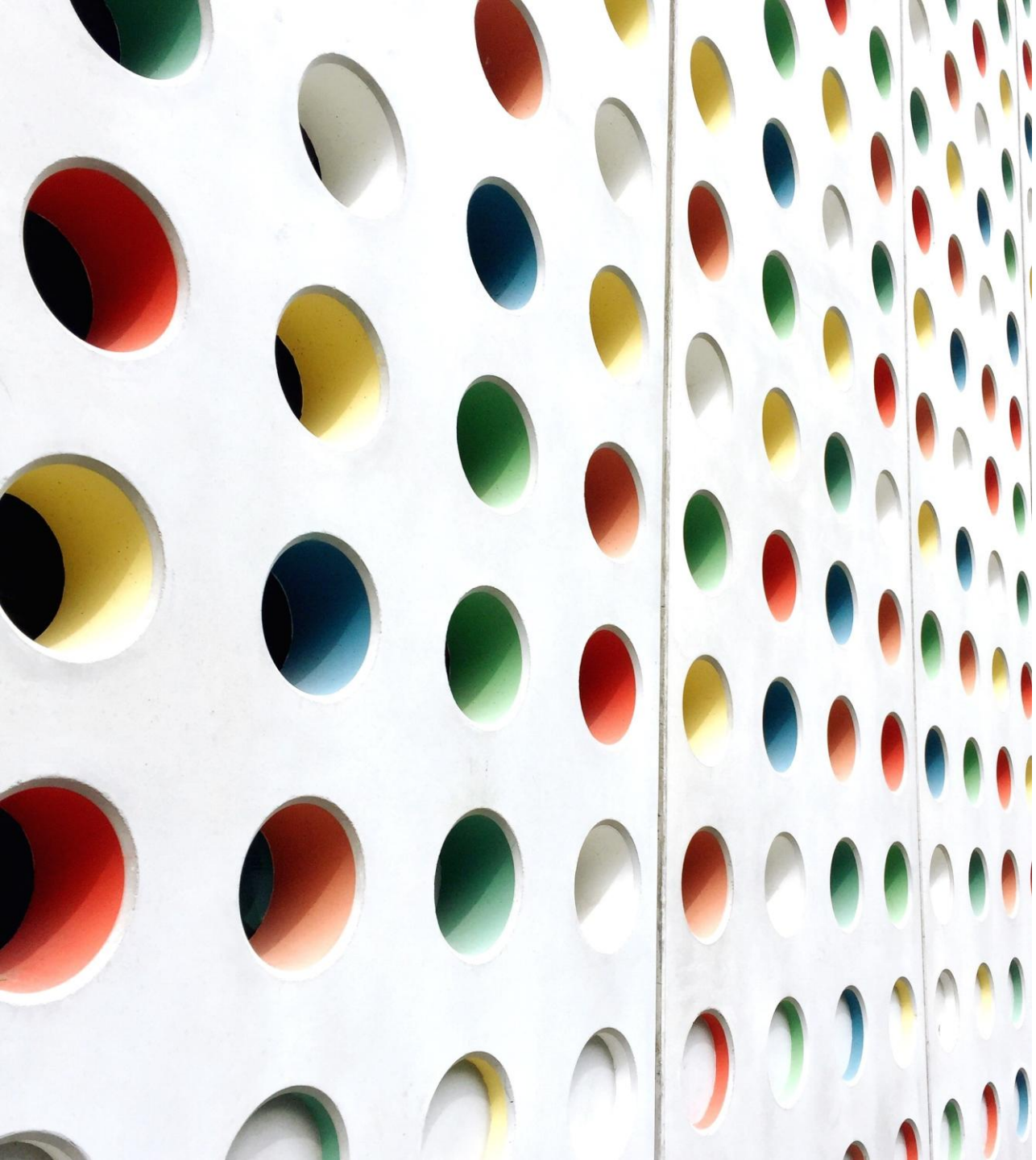


Student Depression Analysis

SUMIT DABAS

211302002

Project Overview

- Analyze depression patterns in students
- Dataset provided by company (CSV format)
- Tools used: Microsoft SQL Server, Tableau, Power BI
- Built dashboards for visualization and insights

Data Overview

- **Dataset**: 11 Columns, 500+ student records

- **Key Features**:
  Gender, Age, Study Hours, Sleep Duration,
  Academic Pressure, Financial Stress,
  Depression, Suicidal Thoughts

- **Goal**: Identify factors contributing to depression

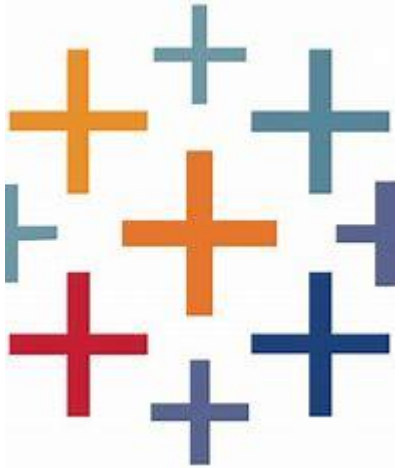
Data Preparation

- Imported CSV into SQL Server
- Cleaned & pre-process data
- Removed blanks/NULLs
- Added derived columns:
- Age_Group (A1, A2, A3)
- Index_Column for unique IDs

Tools Used

Microsoft SQL Server Management Studio

Data cleaning & preprocessing



Tableau

Dashboard 1 (Student Depression Overview)

Power BI:

Dashboard 2 (Advanced Visual Insights) Visualizations enabled clear patterns & interactivity

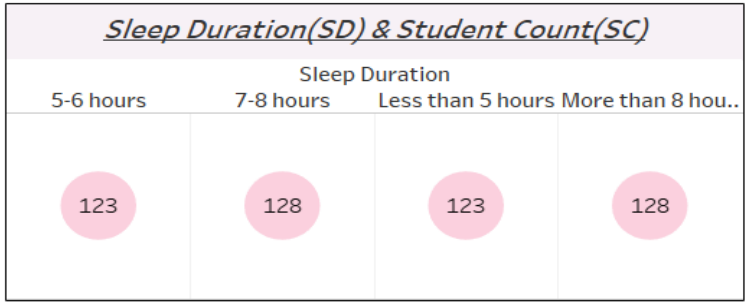
Tableau Dashboard Overview

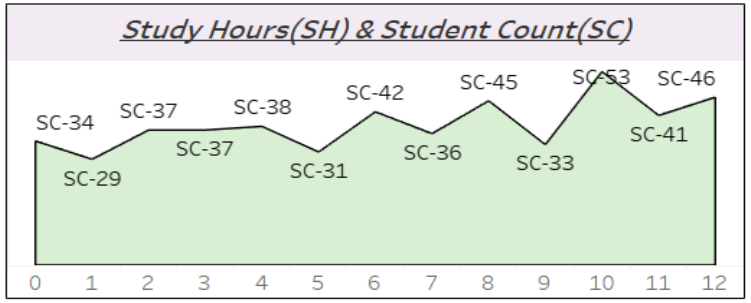
·7–8 hours of sleep most common (128 students)

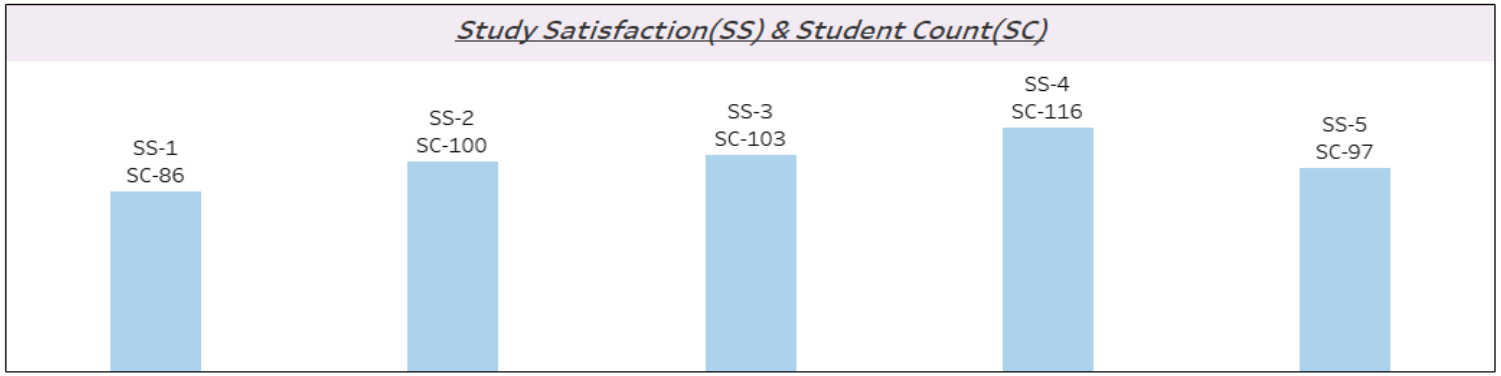
·Study Satisfaction Level 4 had highest count (116)

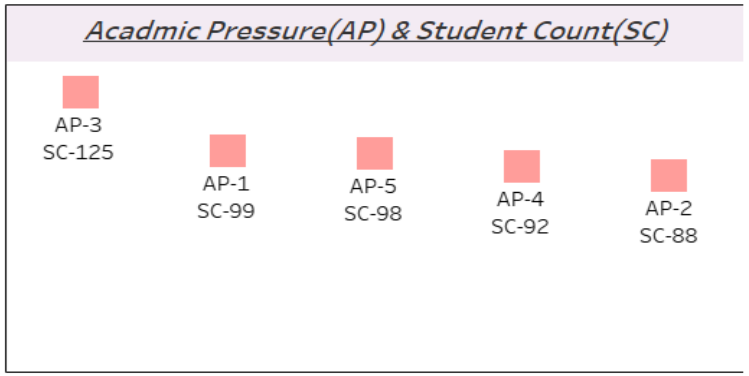
·Academic Pressure level 3 affected most students (125)

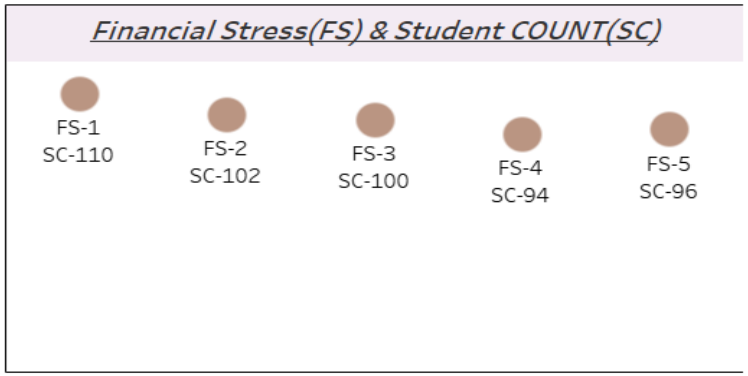
·Balanced distribution of Financial Stress from 1 to 5











Power BI Dashboard Overview

- Gender-wise Depression
- Sleep, Study Hours, Dietary Habits Analysis
- Academic Pressure & Financial Stress
- Family History of Mental Illness

Student Depression Analysis

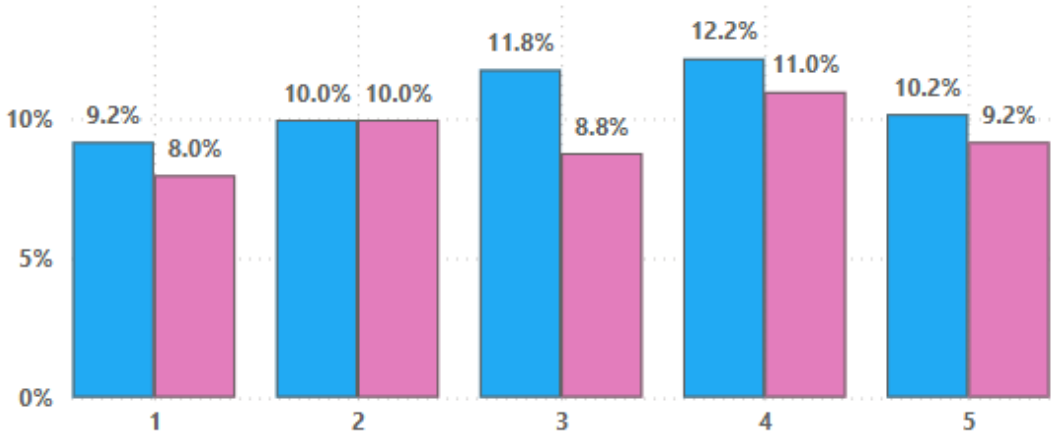
Dietary_Habits: Moderate | Unhealthy | Healthy

Age Group: A1 | A2 | A3

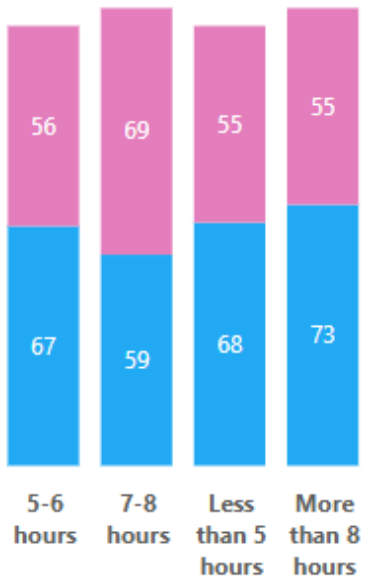
M | F

Depression: Yes | No

Study Satisfaction

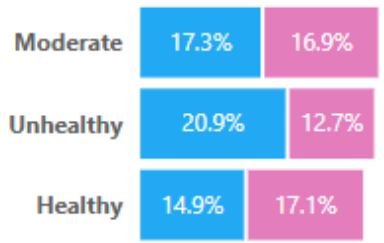


Sleep Duration



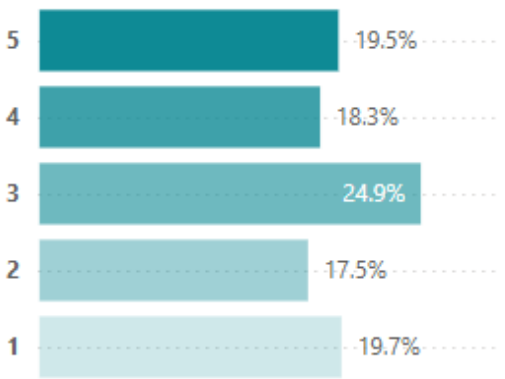
Family_History_of_Mental_Illness	%GT Count of Index_Column
False	52.79%
True	47.21%
Total	**100.00%**

Dietary Habits

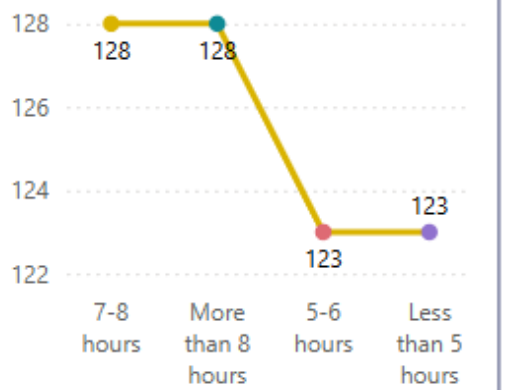


Age_Group	Financial_Stress
A1	39.84%
A2	35.86%
A3	24.30%
Total	**100.00%**

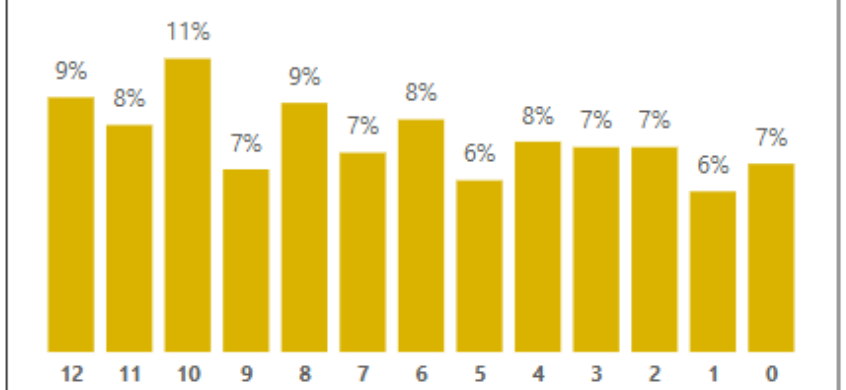
Academic Pressure



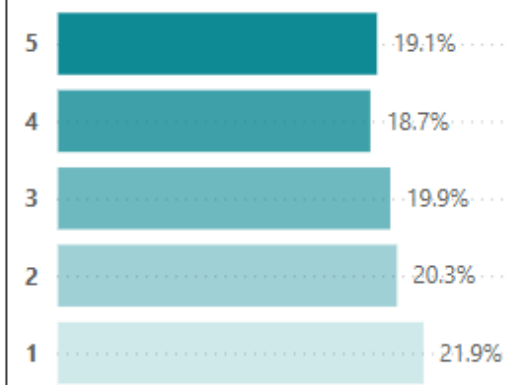
Sleep Duration



Study Hours



Financial Stress



Power BI Dashboard Insights

- Males had higher depression cases than females
- Less than 6 hrs sleep → Higher depression
- Unhealthy diet group: more likely to face depression
- A1 age group (18-24) had highest financial stress
- Depression rate higher in students with mental illness history

Challenges Faced

- **Permission Denied**: Data file access denied resolved via security approval
- **Data Quality**: Inconsistent formats, missing entries resolved via queries.
- **SQL Error**: Type mismatch (bit to varchar) resolved via ALTER
- **Tool Learning**: Self-learned Tableau & Power BI basics
- **Data Linking**: Smooth SQL to dashboard connection required effort

Applications

- Institutions can track mental health trends
- Counselors can target high-risk student groups
- Data helps design better support systems & workshops
- Scalable for larger datasets or real-time systems

Conclusion & Future Scope

·Dashboards helps visualize and understand student depression.

·Useful for awareness, prevention, and planning.

Future Work:

- ·Add predictive models
- ·Include anxiety/stress parameters
- ·Automate survey integration for real-time updates

Thank You