TOPIC: STUDENT DEPRESSION AND MENTAL HEALTH TECHNICAL REPORT 2023

Introduction: Depression among students of different age groups is on the increase daily. This analysis aims to fine-tune the causes of this student depression and offer a possible solution to the menace. The data set used is from Kaggle, and Microsoft Excel was used for the analysis using pivot tables and charts.
Story of Data: A public dataset in the Kaggle.com repository was employed, with rows and columns. Features of this data in column and row are Dependent data: Gender, Academic pressure, Work pressure, CGPA, Study Satisfaction, Job Satisfaction, Sleep Duration, Dietary Habits, etc. A major limitation for this project was the volume of the dataset, too small and no date to fully understand the trend.

Data Splitting and Preprocessing: the data was obtained, cleaned and after thorough observation, there nil duplicates, errors, inconsistencies, blanks or missing values.
Category 1: Independent data: Student ID, Age, City, Profession, Degree
Category 2: Dependent data: Gender, Academic pressure, Work pressure, CGPA, Study Satisfaction, Job Satisfaction, Sleep Duration, Dietary Habits, Have you ever had suicidal thoughts, Work/Study Hours, Family History of Mental Illness, Depression, Financial Stress.

- Healthcare/Research and Development.
- Vice chancellor/ Management board, Government.
- Success in this industry would be how many student recovers from depression of any kind, how student performance improves.

Pre-Analysis:
Potential Analysis/ Questions

Age effect on depression, Genders prone to depression, Depression caused by Work pressure, Depression caused by Academic pressure, Does sleep duration cause depression? Impact of CGPA on depression, Correlation between Study Satisfaction & Depression, How does Job Satisfaction affect depression state, Impact of Dietary Habits on depression, Depression and Work/Study Hours, Does Family History of Mental Illness expose students to depression, Depression caused by Financial Stress.

Potential Analysis

From analysis the age correlation in depression will be reveal, such that we find out if there are ages prone to depression, Are there genders prone to depression, Role of

work pressure in depression, Role of academic pressure on depression, CGPA impaction depression, How lack of sleep affect depression, Families prone to depression, Relevance of financial stress to depression, How student study satisfaction affect depression.

In-Analysis:

1. Male gender accounts for 55.72% of the student depressive state

2. Female gender accounts for 44.28% of the student depressive state

3. 18-27 accounts for the largest age group with student depression at 16574 students coming down with depression.

4. Older students have less depression, as shown by this analysis, as older students between 58-67 years old only account for 2 persons among the total 27901 students.

5. Academic pressure induces depression among students, with 7462 students having 3 episodes as the peak.

6. Only 9 students had 0 episodes of depression.

7. Work pressure has less effect on the students, with 99.9% of students having no depression.

8. Only 0.01% of the students have had at least 2 episodes of depression.

9. Students with no family history of mental illness account for 14398 of student depression, while those with a family history of mental illness account for 13503 of the student depression.

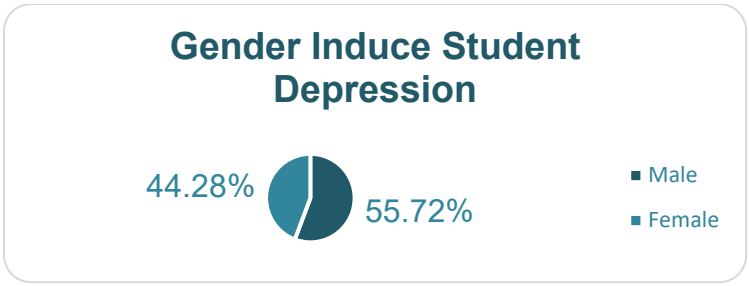
10. Students with unhealthy dietary habits had more episodes of depression at 10317 students, moderate 9921, healthy 7651 and others with just 12 students.

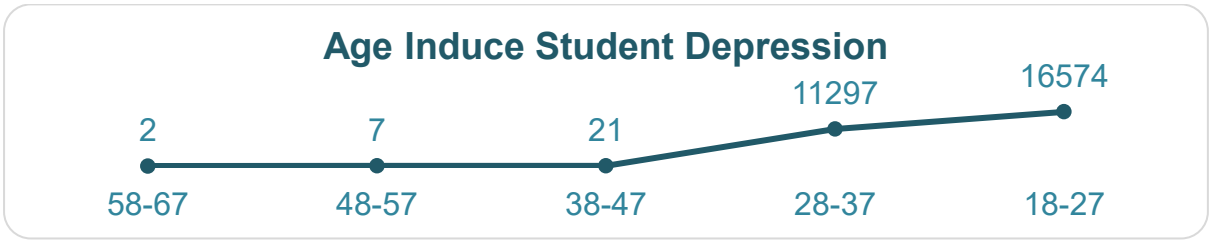
11. Profession also influences depression and mental with student accounting for 27870, architect 8, and teachers 6 per case, as the profession induces depression.
12. Kalyan city accounts for 1570 cases of student depression to take the top spot in this analysis.

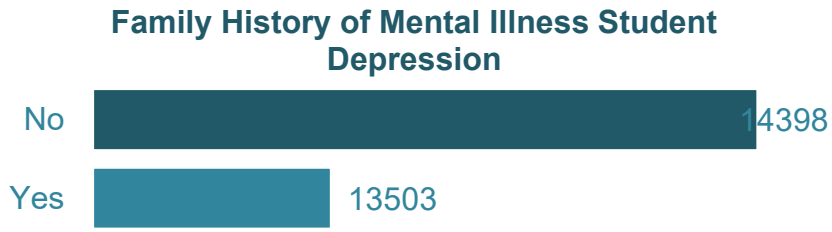
13. Lucknow make the top 5 with 1155 cases among the student population of student with depression.

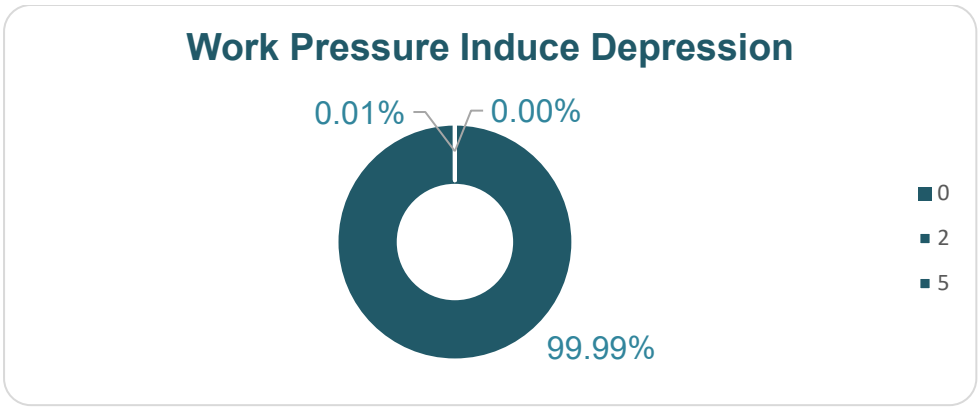
Post-Analysis and Insights: Male gender had more cases of depression, 55.72%, and there was no clarity between students with a family history of depression and those without. Also uncovered were that students' diet matters to their mental as 10317 students having an unhealthy diet had depression. This analysis supports the claim that there were serious cases of depression among students.

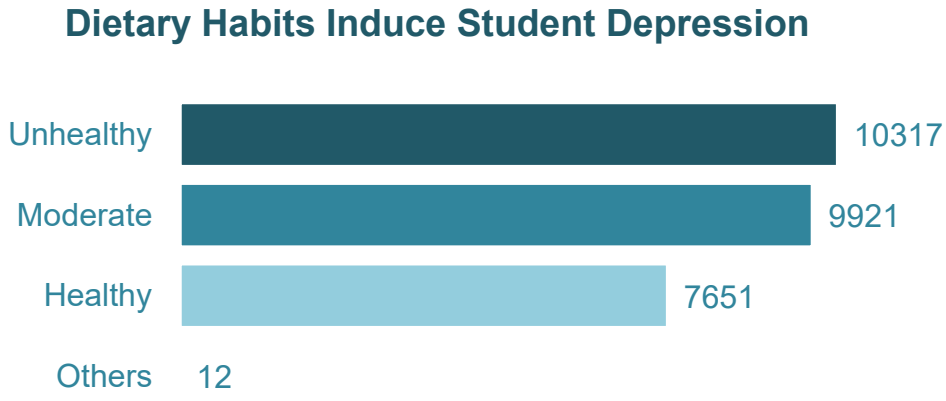
Data Visualisations & Charts:

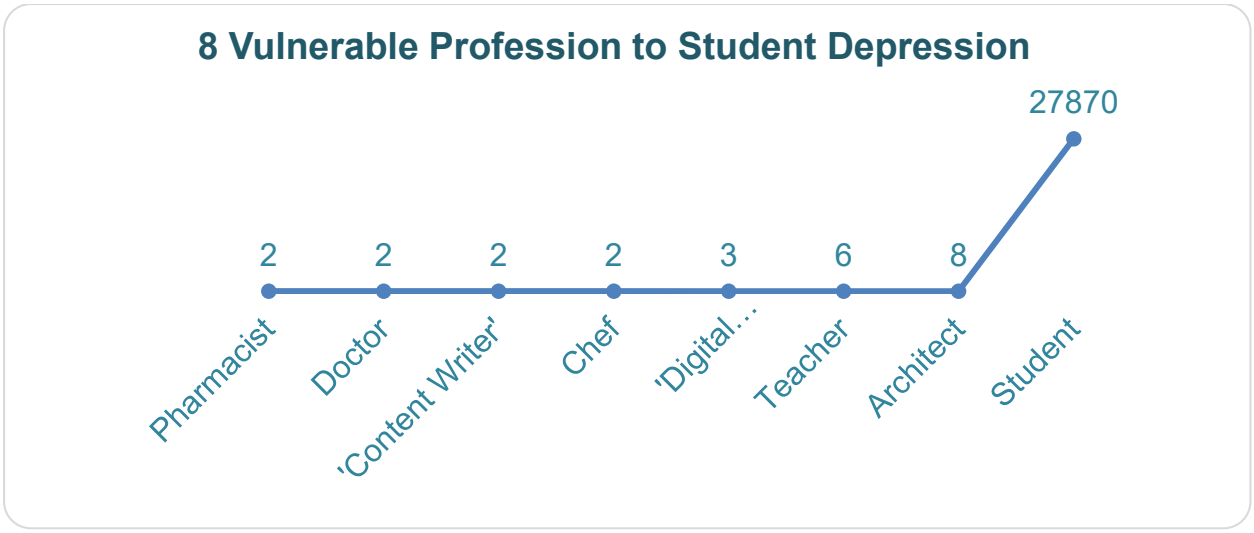

Gender Induce Student Depression
44.28%
55.72%
Male
Female

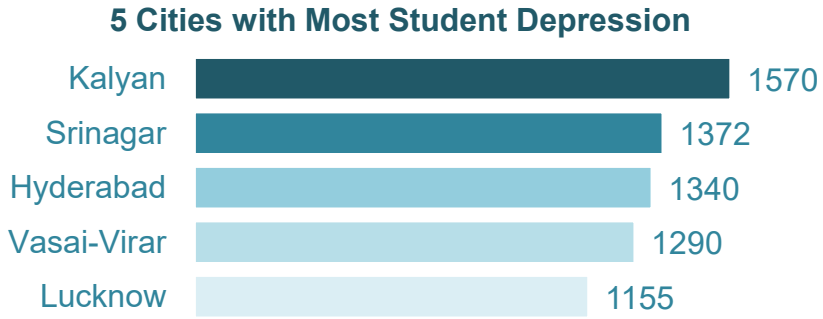

Age Induce Student Depression
2
7
21
11297
16574
58-67
48-57
38-47
28-37
18-27

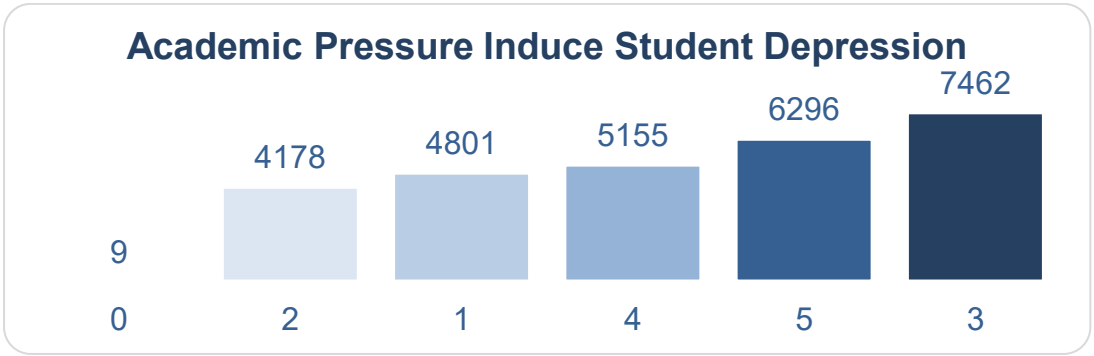

Family History of Mental Illness Student Depression
No
14398
Yes
13503

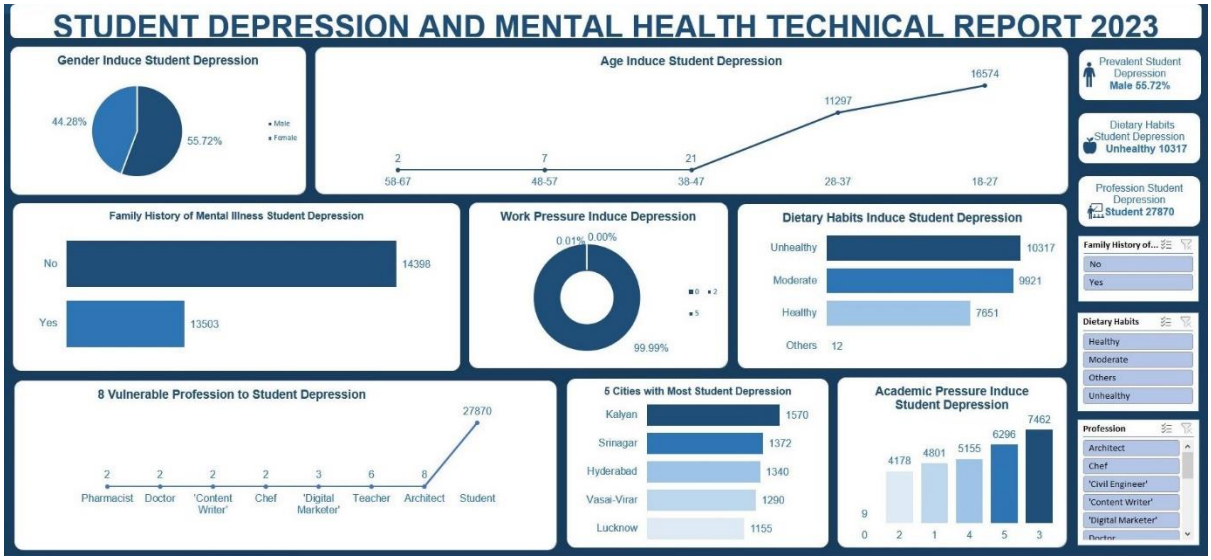

Work Pressure Induce Depression
0.01%
0.00%
99.99%
0
2
5


Dietary Habits Induce Student Depression
Unhealthy
10317
Moderate
9921
Healthy
7651
Others
12


8 Vulnerable Profession to Student Depression
27870
2
2
2
2
3
6
8
Pharmacist
Doctor
'Content Writer'
Chef
'Digital...
Teacher
Architect
Student


5 Cities with Most Student Depression
Kalyan
1570
Srinagar
1372
Hyderabad
1340
Vasai-Virar
1290
Lucknow
1155


Academic Pressure Induce Student Depression
4178
4801
5155
6296
7462
9
0
2
1
4
5
3



- **Recommendations and Observations**

Observation:

1. Observation revealed the following males had depression of 55.72% in total but at 100% male, 18-27 of age had 9260 cases of depression, 28-37 at 6274 cases, 38-47 had 10 cases, 48-57 had 2 cases and 58-67% was 1 case. From analysis, academics had a reasonable case with 4229 having 3 episodes, 3404 having 5 episodes, 2821 cases of at least 4 episodes and 2756, 2332 having 2 and 1 episodes respectively; only 5 cases had 0 episodes of depression. Work pressure had 0.01% having some episodes of 5, another 0.01% having 2 episodes, and 99.98% having no episode of depression. 8132 of students without a family history of depression had episodes, and 7415 of whose families had mental cases. Kaylan topped the cities at 892, Hyderabad, Srinagar, Lucknow, Agra, at 835, 711, 682, 648, respectively. Observed also was student profession and student generally top at 15529, Teachers at 6, Architect students at 3, Pharmacist at 2, others 1 case. It was revealed in observation that those with an unhealthy diet had 6173 cases, 5339 for moderate diet, 4027 for healthy diet and 8 for others.

2. Family with no history of mental illness 14398, had female 43.52% and male 56.48% cases of depression, 18-27 years had 8531 cases, 28-37 had 5854, also 38-47 was 11, others 1. observed also was that academic pressure caused 3 episodes for 3817 students, 5 for 3143, 4 for 2608, 1for 2600, 2 for 2225 and 5 for others. Work pressure induced only 0.01% of cases, while 99.99% had no cases at all. 14398 was observed to have no family history, unhealthy diet 5274, moderate 5163, healthy 3952, while others 9.

3. Observed was family with a history of mental illness had a total of 3503, females had 45.09% and 54.91% males, age 18-27 was 8043 cases, 28-37 had 5443, 38-47 had 10, 48-57 had 6 others 1. It was observed that unhealthy diet had 5043 cases,

moderate diet 4758, healthy diet 3699 and 3 for others. 13486 students had cases of professional depression, Hyderabad covered the city with 708 cases, against Kaylan for others.

4. Observation revealed that Female 43.52% and male 56.48% cases, students 18-27 had 8531 cases, 5854 for 28-37, 11 for 38-47, 1 case for others. Observation shows no family with mental cases had episodes, only those with no previous mental case had 14398. 99.99% had no case as a result of their work, but only 0.01% had 5. In observation, academic activity continues to mount much pressure reaching it value to 3817 with 3 episodes, 3143 had 5 episodes, 2608 with 4 episodes, 2600, 2225, 5 had 1, 2, and 0 episodes respectively. Observation shows that Kaylan city had 890 cases, Srinagar 705, Vasai-Virar 641, Hyderabad 632, Thane 617. Observation also shows students taking the vulnerable profession at 14384, followed by teachers 3, pharmacist 2, and others 1. It was revealed after careful observation that unhealthy eating habit result from 5274 cases, moderate habits in 5163, healthy diet significantly reduces cases to 3952 cases, with other factors accounting for just 9 cases.

5. Healthy diet student 7651, had female cases 47.377% at while male was 52.63%, Family with no history of mental illness 3952, while Family with history of mental illness 3699. City was at Ludhiana 418 cases, Vasai-Virar 400, Kaylan 393, Hyderabad 387 and Srinagar 354. Student had cases of professional depression were observed to be at 7639, Work pressure induced only 0.01% of cases, why 99.99% had no cases at all. Academic pressure caused a lot of depression at 2093 with 3 episodes, 1545 was 1, 1467 was 5, 1331 was 4, 1214 was 2 and 1 case had 0 episode.

Moderate diet 9921, had female cases 46.18% at while male was 53.82%, students 18-27 had 5705 cases, 4204 for 28-37, 9 for 38-47, 3 cases for others. Work pressure had 0.01% having some episodes of 5, another 0.01% having 2 episodes, and 99.98% having no episode of depression. Family with no history of mental illness 5163 and with history of mental illness 4758.

6. Observation revealed Dietary others 12, female had 33.33% and 66.67% male, age 18-27 was 9 case, 28-37 at 4. 100% work pressure induce depression, family with no history of mental illness 9 with history of mental illness 3, student vulnerability was observed to 12. Dietary, only others, which stood at 12, and Ahmedabad city had 2 cases.

Recommendations:

1. Considering that male students had more cases of depression, it is therefore recommended that the student guidance and counselling unit look into this and engage the students in this particular subject matter.

2. From observation, there seems to be no clear-cut difference in the mental illness status of the students, so it is recommended that they all be attended to with no separation or special attention based on history.

3. Observation showed that students between 18-27 were at greater risk than the elderly ones, so it there recommended that measures adopted by the elderly that led to a reduction in cases be taught to the younger students and possibly bring the elderly in for mentorship.

It is also recommended that students be enrolled on courses that will put less pressure on them, which can lead to depression

4. Good dietary intake plays a better role in student mental health cases, so, recommendation is that the student be taught the importance of taking a balanced diet and, where possible, design a diet plan and put in place measures to ensure strict compliance.

5. Generally observed was that students are more prone to depression, and irrespective of their department, the students would have a chance of going into depression, so it is recommended that the management of the schools place a proper guide for student study plans.

6. It was observed that academic pressure had a huge influence on the depression episodes as such, it is recommended that academic activity be well spaced with proper resting time, reduce sessional workload, avoid rush and students should be advised to avoid cramming projects.

7. Work pressure had not much pressure on the student. it is recommended that the measures in place for this be further checked to ensure that even the 0.01% cases are further wiped out.

Conclusion:

Depression among students should be considered a burning issue by the stakeholders, as males' gender had more cases of depression, 55.72%, and there was no clarity between students with a family history of depression and those without. Also uncovered was that students' diet matters to their mental as 10317 students having an unhealthy diet had depression, which therefore means that more students may not have participated in the survey, none heard it, might even be more. Urgent steps should be taken to contain this menace among students. The student's medication history wasn't given, and the year was also not given, so future research should focus on these areas.