## **Student Mental Health Survey**

This dataset offers a detailed look into student demographics, well-being, and academic success. It includes key details like gender, and age, as well as academic factors such as degree level, major, academic year, and CGPA.

It also covers residential status, highlighting the impact of living on or off-campus, and personal experiences with discrimination, harassment, or bullying. These insights are crucial for understanding mental health challenges and academic outcomes.

Lifestyle factors like physical activity and sleep patterns are included, along with students' satisfaction with their studies and perceived academic pressure. This helps gauge overall happiness and engagement.

The dataset addresses major stressors like academic pressure, financial concerns, and social relationships, all of which affect mental health and academic performance. It also tracks mental health indicators such as depression, anxiety, and feelings of isolation, providing valuable data for identifying trends and areas for intervention.

Overall, this dataset is a rich resource for improving student support services, mental health resources, and creating a healthier, more inclusive campus environment.

## **Dataset Information:**

- Dataset Name: Student Mental
- Data source: https://www.kaggle.com/datasets/willianoliveiragibin/student-mental
- Licensing references: Public Domain (CC0)
- DOI Citations: 10.34740/kaggle/dsv/9235088
- Authors: Abdullah Ashfaa & Willian Oliveira Gibin

## Data Cleaning and Modeling steps:

- Removed the "University Column".
- Replaced the scale values:
  - > 1: Very High
  - > 2: High
  - > 3: Moderate
  - > 4: Low
  - > 5: Very Low
- Ensured no "null" values present in the dataset.
- Standardized column names
- Renamed the CPGA categories values to:
  - > 3.5-4.0: Excellent
  - > 3.0-3.5: Good
  - > 2.5-3.0: Average
  - > 2.0-2.5: Below Average
  - ➤ 1.5-2.0: Poor
  - > 0.0-0.0: No GPA
- Renamed the "Average Sleep" categories values to:
  - > 7-8 hrs: Optimal
  - > 4-6 hrs: Short
  - > 2-4 hrs: Very Short
- Renamed the "Sports Engagement" categories to:
  - > 7+ times: Highly Engaged
  - > 4-6 times: Moderately Engaged
  - > 1-3 times: Minimally Engaged
  - ➤ No Sports: Not Engaged
- Created a "Student ID" column and made it increment starting at 1001.
- Generated a random list of unique names.
- Created a "StudentData" table which contains the student ID, Name, and Gender.
- Created a new table "StressReliefActivities" to identify the list of activities.
- Created categories sorting columns to sort the data:
  - CGPAScale
  - SportsEngaementScale
  - AverageSleepScale
  - StudySatisfactionScale
  - AcademicWorkloadScale
  - AcademicPressureScale
  - > FinancialConcernsScale
  - SocialRelationshipsScale
  - > DepressionLevelScale
  - AnxietyLevelScale
  - > IsolationLevelScale
  - FutureInsecurityScale
- Split the Stress Relief Activities by rows to have all the activities listed under each Student ID

## Research Questions and Findings:

- What is the relationship between CGPA and average sleep duration?
  - ❖ There is a positive correlation between CGPA and average sleep duration. Students with higher CGPAs tend to get more sleep on average.
- How does sports engagement impact academic pressure and depression levels?
  - Students engaged in sports generally report lower academic pressure and depression levels compared to those who do not participate in sports.
- Is there a correlation between study satisfaction and academic workload?
  - ❖ There is a positive correlation between study satisfaction and academic workload. Higher academic workloads are associated with higher study satisfaction.
- How do different stress relief activities affect anxiety and isolation?
  - Online entertainment and Religious activities are associated with higher isolation levels and lower Anxiety levels
- How does financial concern vary across different degree majors?
  - ❖ Financial concerns are relatively consistent across different degree majors, with no significant variation observed.
- What is the relationship between academic year and levels of depression and anxiety?
  - Depression and anxiety levels tend to increase as students progress to higher academic years.
- How does gender influence the choice of stress relief activities?
  - ❖ Females are more likely to engage in religious activities and social connections, while males prefer Religious activities, and online entertainment.
- Is there a significant difference in CGPA between students who experience campus discrimination and those who do not?
  - Students engaged in sports generally report lower academic pressure and depression levels compared to those who do not participate in sports.