

Technical Report: Analysis of Student Depression Rate and Causes at Phonix University

Introduction

I discovered that Mental health issues among university students have become a growing concern, impacting academic performance, social interactions, and overall well-being. In order to understand the prevalence and causes of student depression, a data-driven analysis was conducted using Phonix University as a case study. This technical report outlines the findings of the study, presenting statistical insights derived from student surveys, academic records, and psychological assessments.

By leveraging the powerful analytical tools within Microsoft Excel, such as pivot tables, regression analysis, and trend forecasting, the research identifies key factors contributing to depression, including academic pressure, financial stress, social isolation, and lifestyle habits. Through the systematic organization and visualization of data, this report aims to provide actionable recommendations for improving mental health support services and fostering a more supportive university environment.

By implementing the insights gained from this study, Phonix University can enhance student well-being and promote a healthier academic experience.

Problems Being Addressed

The primary objectives of this analysis includes:

- Identifying the prevalence of depression among students.
- Examining key contributing factors to student depression.
- Evaluating existing support systems at Phonix University.
- Recommending strategies to mitigate depression rates.

Key Dataset and Methodology

Academic Performance Data

- GPA trends over semesters
- Course failure rates
- Financial aid or scholarship status
- Part-time job engagement
- Sleep patterns and nutrition data
- Workload intensity (number of courses per semester)
- Exam stress levels (self-reported)
- Family pressures and support system

Microsoft Excel was used to structure and analyze using secondary data from the university

Pivot Tables was used for summarizing data trends across different student categories; And Regression Analysis to Identifying correlations between depression rates and academic/workload stress.

Trend Analysis Visualizing fluctuations in student mental health over semesters using charts.

Then Conditional Formatting to Highlight patterns, such as high-risk students based on multiple stress indicators.

Story of Data

The data used for this analysis is downloaded from Kaggle.com.

Data Structure

The data structure has the column representing different variables such as Student names, Dietary habit, City, Profession, Sleeping time, Suicidal thoughts and the likes, while the rows represent different experience by the students.

The important features in this performance analysis include the Dietary habits, Sleeping time, Study duration, CGPA, Suicidal thoughts and Age. The dietary habits,

suicidal thoughts, study duration and sleeping time are very important in determining the likelihood of depression.

Data Splitting and Preprocessing

Data cleaning

After observing the data manually, I discovered that the data was consistent to an appreciable level. There was no missing data in a cell, and no missing rows that needed cleaning. I also checked if data was duplicated in the dataset but no Data duplicate was discovered. And no white space found meaning the dataset was consistent.

I now Split the data into category 1 which is independent values and category 2 dependent values.

Industry type and stakeholders

The industry type is a the educational institution and the stakeholder is the Health and Education Ministry (Minister of Health and Education).

Core Value to the industry

Student well-being and institutional improvement; To produce sane and active students without any form of depression

Pre-Analysis

Project split

Category 1 Independent Values

Student Name, Age, Gender, City, Profession, Dietary Habit, Suicidal Thoughts, Family History.

Category 2 Dependent Values

Age, Sleep Duration, Study Duration, CGPA, Depression.

Potential Analysis

Analyzing the effects of low hours of sleep as one of the determining factors for depression

Analyzing academic pressure as determinant also

Analyzing long study hours as depression cause

Analyzing unhealthy dietary habit as determinant of depression

Analyzing the family history of depression

Analyzing thoughts of suicidal

Potential Insight

By analyzing the low hours of sleep we will discover potential victims of depression.

Academic pressure will assist us to know victims of depression also, especially when the pressure becomes unbearable and important to achieve with very strict deadlines.

Long study hour also does not allow the mind to relax thus depression could generate

Unhealthy dietary and bad dietary is another high cause of depression

IN ANALYSIS

In-Analysis Observation

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In analysis insight

By analyzing the low hours of sleep, we will discover potential victims of depression.

Rest is key in keeping sound health, and enough rest helps to build body immune system, meaning where enough rest is lacking health can fail.

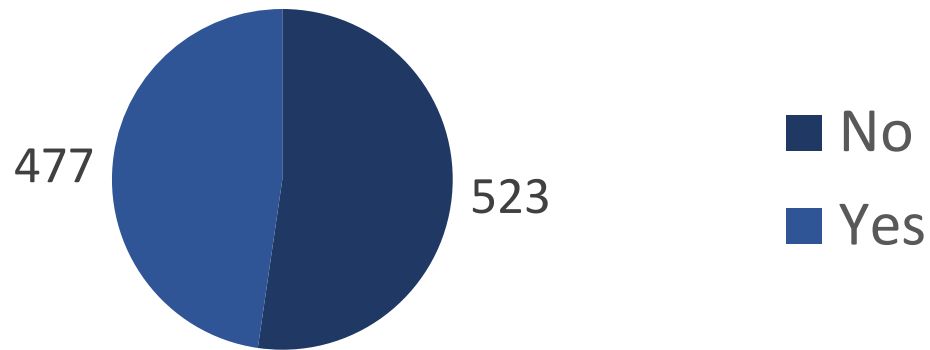
Academic pressure will assist us to know victims of depression also, especially when the pressure becomes unbearable. For every activity in the school environment, deadlines are set and most times strict so when a student has too many deadlines to meet then frustration sets in.

Long study hour also does not allow the mind to relax thus depression could generate. Unrest is sure when a student engages in long hours of studying without rest. The brain is forced to accommodate even when it is tired.

Unhealthy dietary and bad dietary is another high cause of depression. When the dietary is not good enough it affects proper cognition and brain functionality thereby causing serious issues.

Data Visualization and Chart

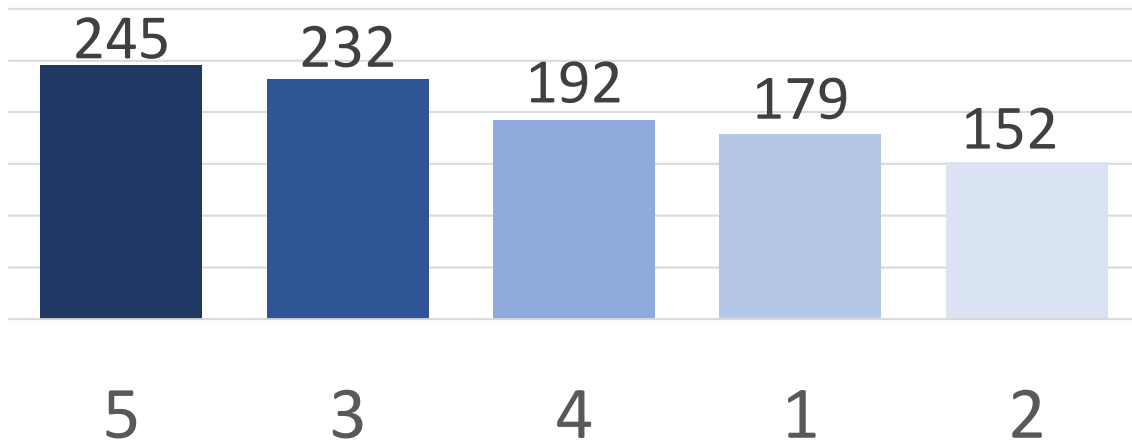
Family History Of Depression



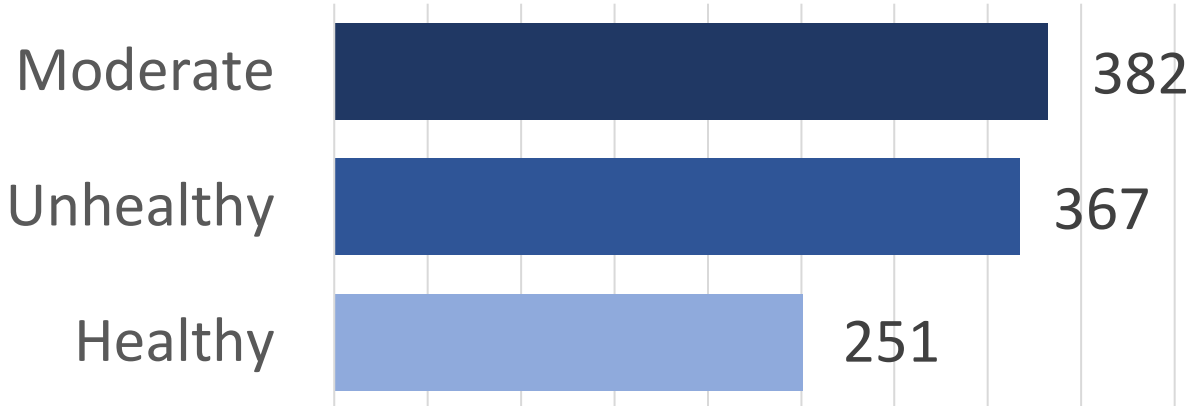
Number Of Depressed Students



Level Of Academic Pressure



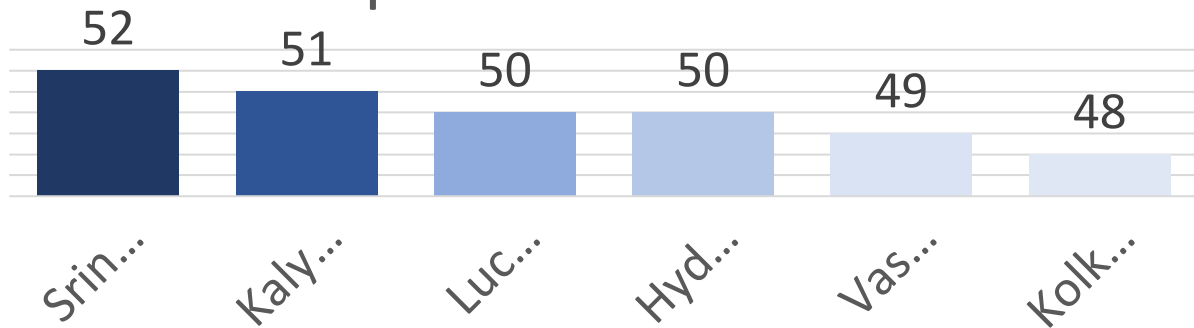
Dietary Habit Among Students

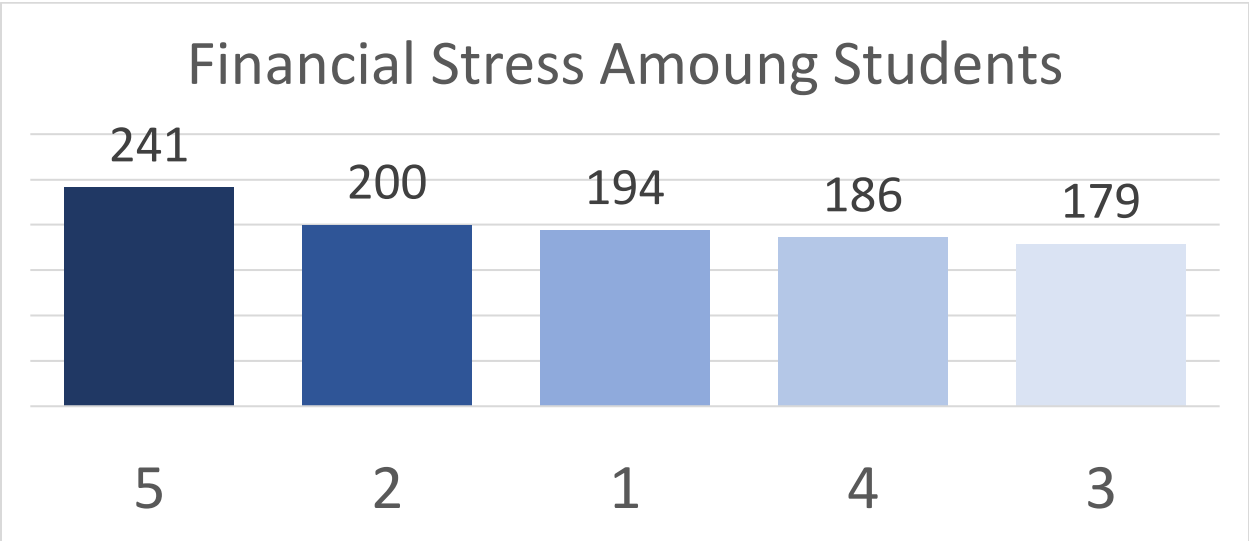
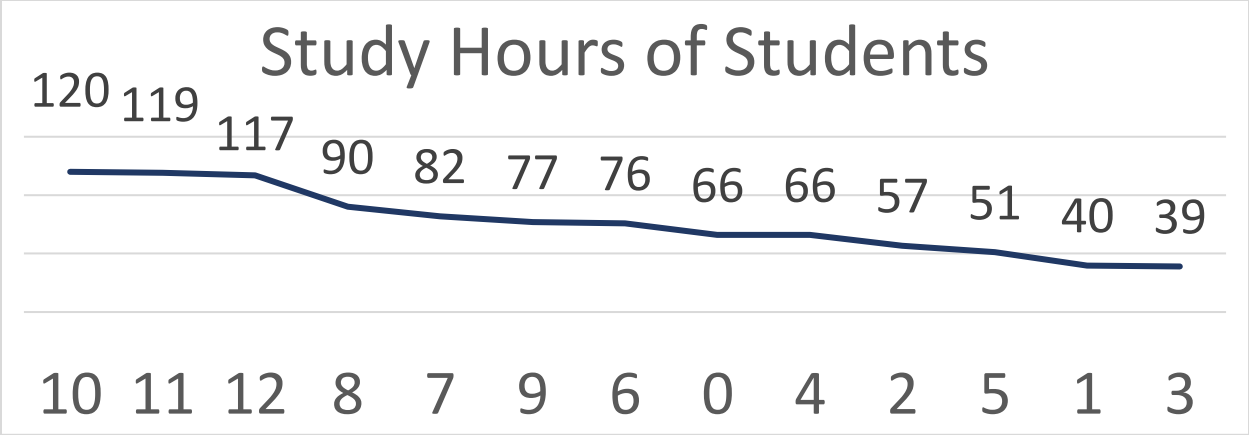


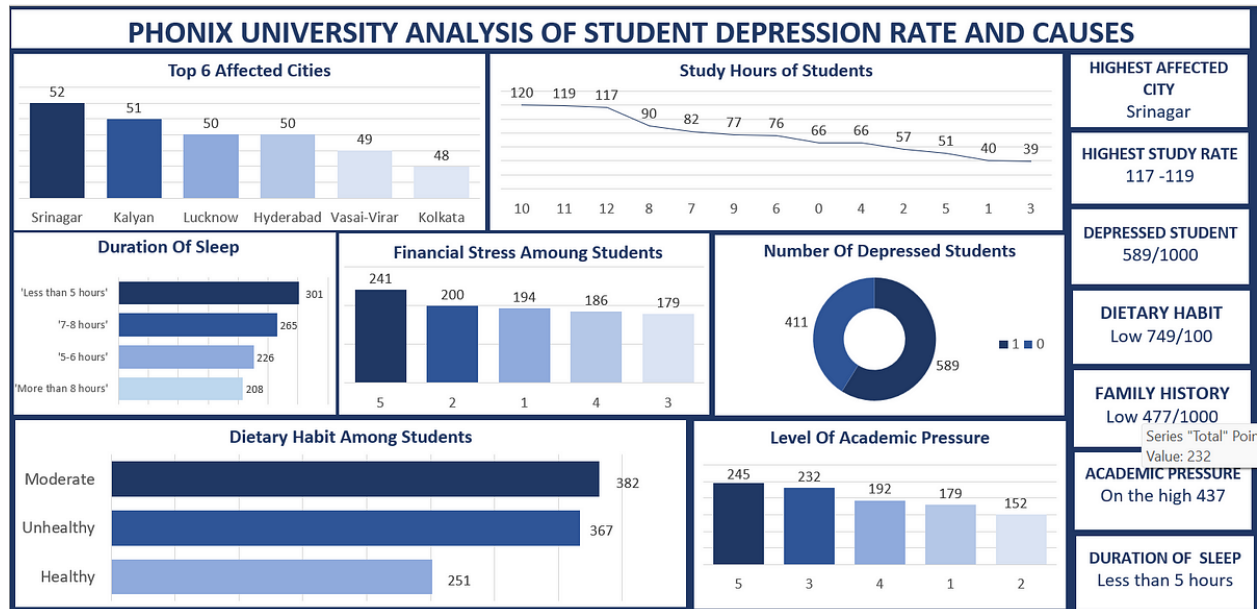
Duration Of Sleep



Top 6 Affected Cities







RECOMMENDATIONS AND OBSERVATIONS

Final Observation

By analyzing the low hours of sleep, we will discover potential victims of depression.

Rest is key in sound health and enough rest helps to build body immune system, meaning where enough rest is lacking health can fail.

Academic pressure will assist us to know victims of depression also, especially when the pressure becomes unbearable. For every activities in the school environment, deadlines are set and most times strict so when a student has too many deadlines to meet then frustration sets in.

Long study hour also does not allow the mind to relax thus depression could generate. Unrest is sure when a student engages in long hours of studying without rest. The brain is forced to accommodate even when it is tired.

Unhealthy dietary and bad dietary is another high cause of depression. When the dietary is not good enough it affect proper cognition and brain functionality thereby causing serious issues.

Final Recommendation

By analyzing the low hours of sleep we will discover potential victims of depression.

Rest is key in sound health and enough rest helps to build body immune system, meaning where enough rest is lacking health can fail. I recommend that student be compelled to rest by creating policies that promotes rest and relaxation coupled with a dimension of punishment if not obeyed. I also recommend that trainings about importance of relaxation in education should be introduced.

Academic pressure will assist us to know victims of depression, especially when the pressure becomes unbearable. For every activity in the school environment, deadlines are set and most times strict, so when a student has too many deadlines to meet, then frustration sets in. I recommend that even though it is important for deadlines to be met and goals to be set, the educationist should set goals that are realistic bearing in mind other causes and the private time of the student; as there are other areas of learning that requires student participation though not in class setting example of such is sports and other games.

Long study hour also does not allow the mind to relax thus depression could generate. Unrest is sure when a student engages in long hours of studying without rest. The brain is forced to accommodate even when it is tired. I recommend that strict hours of learning or studying be introduced so as to allow the brain rest enough. Classes should not be fixed back-to-back in order to allow the brain operate effectively. Other learning activities should also be emphasized so as to allow a dimension of relaxation in the body system.

Unhealthy dietary and bad dietary is another high cause of depression. When the dietary is not good enough it affects proper cognition and brain functionality thereby causing serious issues. I recommend that some common dietary that are rich in the required vitamins be introduced to students for free or at a well subsidized rate to encourage accessibility by the students in the learning environment. This will, in a way assist students that lack certain requirements of vitamins to have a better diet. I also recommend that awareness and trainings on food and fruits that are rich in the required vitamins be done

so students that are not knowledgeable about this can learn. I recommend that some dietary habit be restricted among the students especially in the school environment.