

## MENTAL HEALTH AND ASSOCIATED ACADEMIC AND LIFESTYLE FACTORS AMONG UNIVERSITY STUDENTS

**Daniel Foster<sup>1</sup>, Michael Thompson<sup>2</sup>, Christopher Reed<sup>3</sup>, Andrew Collins<sup>4</sup>, Jonathan Brooks<sup>5</sup>**

<sup>1</sup> College of Education, United Arab Emirates University, Al Ain, United Arab Emirates

<sup>2</sup> School of Health Sciences, University of Birmingham Dubai, Dubai, United Arab Emirates

<sup>3</sup> College of Medicine, Gulf Medical University, Ajman, United Arab Emirates

<sup>4</sup> Faculty of Social Sciences, American University of Sharjah, Sharjah, United Arab Emirates

<sup>5</sup> College of Humanities and Social Sciences, Zayed University, Abu Dhabi, United Arab Emirates

**\*Corresponding Author;** Daniel Foster

Email: [daniel.foster@uaeu.ac.ae](mailto:daniel.foster@uaeu.ac.ae)

### **Abstract**

*The pressure of academics, lifestyle and social issues have made mental health issues among university students to become a worldwide issue of concern. This study aims to explore the rate of stress, anxiety and depression among university students and to determine the relationship between these variables and academic, lifestyle, and social variables. The study was quantitative and cross-sectional, using a secondary data of 100 students in the university. The operationalization of mental health was based on stress level, depression score, and anxiety score and the independent variables were academic factors (CGPA and semester credit load), lifestyle factors (sleep quality, physical activity, and diet), and social factors (social support and financial stress). Descriptive statistics indicated that the level of stress, anxiety, and depression were moderate, and the most salient problem was stress. The correlation analysis findings demonstrated that the level of stress was significantly connected to financial stress, and academic workload was significantly connected to anxiety. The graphical analysis also showed that stress and anxiety were related to low levels of physical activity and low levels of sleep quality. Social support proved to be a buffer in reducing mental health issues. The findings suggest that mental health in students within the university is multifactorial with academic, lifestyle and social variables being the most significant determinant of mental health. The paper discusses the role of holistic interventions, including improved counseling services, support of healthy lifestyles, and managing academic workload, to enhance the well-being of students.*

**Keywords:** Sleep Quality, Physical Activity, Social Support, Financial Stress, Cross-Sectional Study.

## 1. Introduction

Mental health has become a controversial topic of debate in the context of tertiary education institutions worldwide, and evidence is growing of the susceptibility of university students to mental distress. The transition to university life is likely to be accompanied by academic, social, and personal changes that can cause mental health problems (Zorach & Lipka, 2023). Empirical studies indicate that stress, anxiety, and depression among students are constantly high, and it is possible to conclude that mental health issues are not an exception but are prevalent among university students (Beiter et al., 2015; Bruffaerts et al., 2018). These problems have been exacerbated by the global disruptions such as the COVID-19 pandemic, which has led to a higher level of psychological distress in students because of the uncertainties, isolation, and academic disruptions (Cao et al., 2020; Oh et al., 2021; Rajkumar, 2020).

Well known causes of stress to students are academic pressure. The high course work, exams and performance demands can have a significant impact on the psychological well-being of students (Denovan & Macaskill, 2017; Gustems-Carnicer et al., 2019). Besides the requirements of academia, other lifestyle elements like sleep, exercise, and diet have a significant influence on mental health conditions. It has been noted that anxiety and depression are related to lifestyle factors (Doré et al., 2020; Tian-Ci Quek et al., 2019). In addition, the differences in mental health among students are also caused by social and contextual factors such as perceived support, financial stress, and interpersonal relationships (Ibrahim et al., 2019; Khawas, 2018).

In a larger sense, mental health may be perceived as a multidimensional construct that involves emotional, psychological, and social well-being (Rokach, 2022). Recent longitudinal data indicates that mental health problems in students can have different developmental patterns which, again, stresses the necessity of thorough and context-specific analysis (Liu et al., 2023). Together, these results emphasize the need to study mental health in a holistic context, which combines academic, lifestyle, and social elements.

Although there is increased awareness of mental health problems among university students, the way different academic and lifestyle factors interact to determine psychological well-being is not well understood. Although previous studies have found single factors like academic stress or poor lifestyle habits, there is a necessity of combined analysis that would take into account a number of factors impacting the results simultaneously. Furthermore, despite the increasing efforts made towards mental health programs, many students are yet to have their needs for mental wellness addressed, implying that there is still inadequate comprehension and measures in place (Ibrahim et al., 2019; Pedrelli et al., 2015). Therefore, such multifaceted relations should be explored empirically through the assistance of data on the student level.

The literature has largely concentrated on the various aspects of the mental well-being, including stress, anxiety, and depression with the three conditions being perceived as independent of one another and not interdependent (Salari et al., 2020). On the same note, most of the studies focus on either academic factors or lifestyle behaviors without an apt investigation on the integration of both factors. This fragmented approach limits the holism of the multifactoriality of the mental health of university students. This therefore demonstrates a definite necessity of a study that entails academic, lifestyle and social variables in the same analytical framework to give a more precise picture of student mental health.

In order to address these gaps, the proposed study is expected to measure the intensity of stress, anxiety and depression among university students and also to determine the correlation between the variables with the chosen academic and lifestyle variables. In particular, the research aims at investigating the correlation between mental measures and academic measures (CGPA and semester credit load), lifestyle measures (sleep quality, diet, and physical activity). The study will contribute to the overall image of mental health of students by providing a multidimensional approach. The following research questions will be used in the research: What is the level of mental health problems among college students? Are academic factors greatly related to mental health outcomes? Are there any lifestyle factors affecting stress, anxiety, and depression levels? Through previous studies, it is hypothesized that academic workload has a strong relationship with stress levels, poor sleep quality has a strong relationship with depression and anxiety, and social support has a negative relationship with mental health problems. These hypotheses can be explained by a theoretical anticipation that academic, behavioral, and social factors interact to determine mental health.

## 2. Methodology

### 2.1 Research Design

The research design will be a quantitative, cross-sectional study aimed at investigating mental health and its relationship with academic and lifestyle variables in university students. It was decided that a cross-sectional approach would be suitable because it will be possible to analyze a variety of variables at one moment, which will give a picture of the mental health status of students and its affecting factors. The research adheres to the exploratory and correlational paradigm, to determine the patterns and relationships between mental health indicators and a variety of academic, lifestyle, and social variables. And, too, the study is aimed at investigating the intensity and the direction of the associations between the chosen variables.

### 2.2 Data Source

The study is based on a secondary data which is a survey on the mental health of students. The original data was filtered and reduced to a sample of 100 university students in order to facilitate a manageable and focused statistical analysis (Saint, 2023). The dataset includes structured answers that reflect different factors of academic performance, lifestyle, social, and mental health of students. The subset was selected to ensure that the dataset is complete and that there is very little missing data in the dataset, and that the sample adequately represents essential variables, such as stress levels and demographic variables. The given curated data serves as a reliable initial point of an exploratory and inferential statistical

analysis within the framework of the study.

**2.3 Variables**

Mental health in this study is the dependent construct and operationalized using three main indicators namely stress level, depression score and anxiety score. All these variables are a measure of the psychological well-being of university students and are the main outcomes of interest. Stress level is the perceived level of stress, and the scores of depression and anxiety reflect emotional and psychological distress of the students.

The independent variables are classified as academic, lifestyle and social or other. Academic variables are CGPA, which is the academic performance, semester credit load, which is an indicator of academic workload, and course, which is the field of study. The lifestyle factors include the quality of sleep, physical activity, quality of diet, substance use, and extracurricular participation, which all indicate habits and patterns of behavior in students that are daily. Examples of social and other contextual factors are social support, financial stress, relationship status, use of counseling services, type of residence, family history of mental health conditions, and presence of chronic illness. These variables give an all-encompassing framework of the multifaceted effects on the mental health of students.

**2.4 Data Analysis Techniques**

A descriptive and inferential statistical analysis were combined to analyze data. Descriptive statistics such as frequencies, percentages and means were used to summarize the features of the sample and provide a summary of the important variables. Pearson correlation analysis was used to test the associations between the mental health indicators and the independent variables of choice. This approach enables the evaluation of the strength and direction of linear relationships among variables.

Further, the analysis was conducted using multiple linear regression analysis where necessary, to establish the significant predictors of mental health outcomes (stress, depression, and anxiety). Regression analysis enables you to determine the relative contribution of each independent variable without affecting the effect of the other independent variables. All statistical tests were done at the right level of significance to guarantee reliability and validity of the results.

**2.5 Ethical Considerations**

The research is conducted on the basis of a completely anonymized secondary dataset, which does not contain any personally identifiable information. Since the data were already existing and gathered without personal interaction with the participants, there was no interaction with the participants throughout this study. The analysis process was conducted confidentially and strictly used in academia and research. Hence, the research complies with the existing ethical guidelines of secondary data analysis.

**3. Results and Analysis**

**3.1 Descriptive Statistics of Study Variables**

Table 1 gives the descriptive statistics of the core study variables. The participants were students of the university of average age 22.46 (SD = 3.38) aged between 18 and 32 years. The performance in academics, in terms of CGPA, had a mean of 3.50 (SD = 0.29), which is relatively high to depict overall good academic performance among the respondents. Academic workload was moderate to high with a mean semester credit load of 22.06 (SD = 4.22).

**Table 1.** Descriptive Statistics of Core Study Variables

Variable	Mean	SD	Min	Max
Age	22.46	3.38	18.00	32.00
CGPA	3.50	0.29	2.82	4.00
Financial Stress	2.55	1.69	0.00	5.00
Semester Credit Load	22.06	4.22	15.00	29.00
Stress Level	2.56	1.71	0.00	5.00
Depression Score	2.21	1.58	0.00	5.00
Anxiety Score	2.27	1.48	0.00	5.00

Regarding the mental health indicators, the average level of stress was 2.56 (SD = 1.71), the average level of depression and the level of anxiety were 2.21 (SD = 1.58) and 2.27 (SD = 1.48), respectively. Such values indicate that students had moderate degrees of psychological distress. Financial stress also showed a similar mean value of 2.55 (SD = 1.69) which means that the financial issues were a contextual factor relevant in the sample. Stress had the largest mean of the three mental health indicators as shown in Figure 1, then anxiety, and finally depression. These mean values are fairly close, which indicates that psychological distress in students is multidimensional, with the most salient one being stress, but it is not significantly different than anxiety and depression.

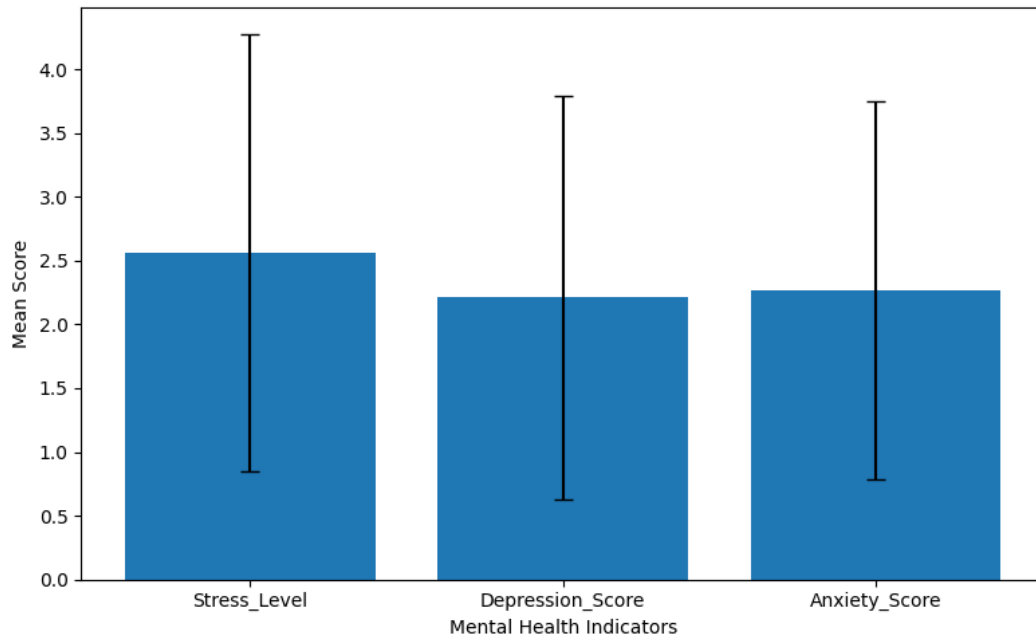


Figure 1. Mean Scores of Stress, Depression, and Anxiety Among University Students

### 3.2 Distribution of Academic, Lifestyle, and Social Characteristics

Table 2 summarizes the distribution of key categorical variables. The sample had a balanced gender representation with 51% of the female and 49% of male respondents. Academically, the highest percentage of students pursued medical courses (29%), then law (23%), engineering (16%), computer science (13%), other courses (12%), and business (7%), which is a good representation of various academic disciplines.

Table 2. Frequency Distribution of Selected Categorical Variables

Variable	Category	Frequency	Percentage (%)
Gender	Female	51	51.0
	Male	49	49.0
Course	Medical	29	29.0
	Law	23	23.0
	Engineering	16	16.0
	Computer Science	13	13.0
	Others	12	12.0
	Business	7	7.0
Sleep Quality	Good	55	55.0
	Average	39	39.0
	Poor	6	6.0
Physical Activity	Moderate	40	40.0
	Low	34	34.0
	High	26	26.0
Diet Quality	Average	64	64.0
	Poor	20	20.0
	Good	16	16.0
Social Support	Moderate	52	52.0
	High	34	34.0
	Low	14	14.0
Substance Use	Never	88	88.0
	Occasionally	7	7.0
	Frequently	5	5.0
Residence Type	On-Campus	43	43.0

	Off-Campus	35	35.0
	With Family	22	22.0

Lifestyle-related factors showed that most students expressed good sleep quality (55%), with 39% expressing average sleep quality and only 6% expressing poor sleep quality. The majority of the participants (40 percent) were moderate, then low (34 percent) and high (26 percent). The quality of the diet was reported to be mostly average (64%), with minor percentages of poor (20%), and good (16%) diets. These results indicate that the majority of students did not have extreme lifestyle patterns but moderate ones.

Social and contextual variables also showed that 52 percent of the students stated moderate levels of social support, 34 percent had high levels of support and 14 percent had low support. The use of substances was also relatively low, with 88% of the respondents stating that they did not use them, and only a few (7% and 5% respectively) said that they occasionally or frequently used them. In terms of living arrangements, 43 percent of the students lived on campus, 35 percent off campus and 22 percent with family. On the whole, the sample represents a rather balanced ratio of academic, lifestyle, and social features, which gives a complete background of the mental health outcomes.

### 3.3 Correlation Analysis

The Pearson correlation table in Table 3 gives an idea about the correlation between mental health indicators and the chosen academic and contextual variables. Of the relationships observed, the level of stress was positively and significantly correlated with financial stress ( $r = 0.241$ ,  $p < 0.05$ ), which implied that the greater the financial pressure, the greater the perceived stress level among the students.

**Table 3.** Pearson Correlation Matrix

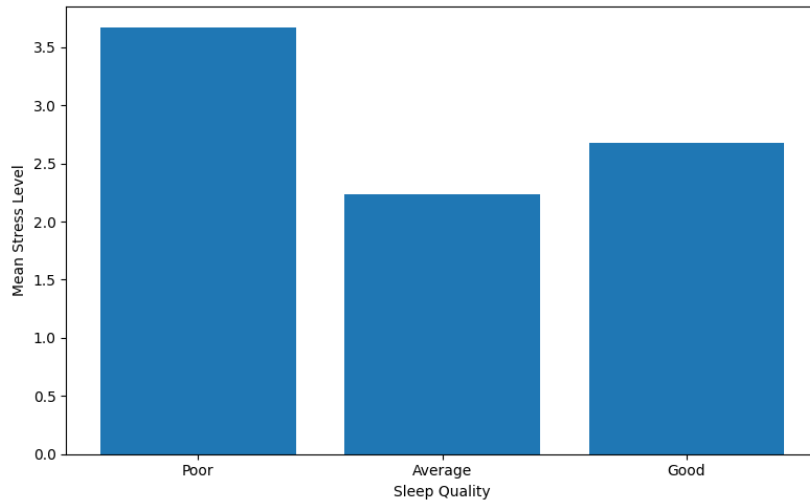
Variables	Stress Level	Depression Score	Anxiety Score	CGPA	Financial Stress	Semester Credit Load
<b>Stress Level</b>	1.000 ( $p=0.000$ )	-0.077 ( $p=0.445$ )	0.075 ( $p=0.458$ )	-0.008 ( $p=0.940$ )	<b>0.241</b> ( $p=0.016$ )	-0.123 ( $p=0.221$ )
<b>Depression Score</b>	-0.077 ( $p=0.445$ )	1.000 ( $p=0.000$ )	-0.003 ( $p=0.977$ )	0.088 ( $p=0.384$ )	0.055 ( $p=0.590$ )	0.037 ( $p=0.712$ )
<b>Anxiety Score</b>	0.075 ( $p=0.458$ )	-0.003 ( $p=0.977$ )	1.000 ( $p=0.000$ )	-0.018 ( $p=0.860$ )	0.122 ( $p=0.228$ )	<b>0.215</b> ( $p=0.031$ )
<b>CGPA</b>	-0.008 ( $p=0.940$ )	0.088 ( $p=0.384$ )	-0.018 ( $p=0.860$ )	1.000 ( $p=0.000$ )	-0.088 ( $p=0.385$ )	-0.176 ( $p=0.079$ )
<b>Financial Stress</b>	<b>0.241</b> ( $p=0.016$ )	0.055 ( $p=0.590$ )	0.122 ( $p=0.228$ )	-0.088 ( $p=0.385$ )	1.000 ( $p=0.000$ )	<b>0.246</b> ( $p=0.014$ )
<b>Semester Credit Load</b>	-0.123 ( $p=0.221$ )	0.037 ( $p=0.712$ )	<b>0.215</b> ( $p=0.031$ )	-0.176 ( $p=0.079$ )	<b>0.246</b> ( $p=0.014$ )	1.000 ( $p=0.000$ )

The score of anxiety also showed a strong positive correlation with the semester credit load ( $r = 0.215$ ,  $p < 0.05$ ), indicating that students with a higher credit load reported higher scores on anxiety. Moreover, semester credit load showed a significant relationship with financial stress ( $r = 0.246$ ,  $p < 0.05$ ), which suggests that academic demands could be connected to financial stress.

Other associations such as between CGPA and mental health indicators were not found to be significant. Likewise, the score of depression was not significantly related to the academic or financial variables that were chosen. The conclusion we can draw from this information is that although performance on its own may not be correlated to mental wellbeing, academic workload and financial pressure become more important variables.

### 3.4 Lifestyle Factors and Mental Health Outcomes

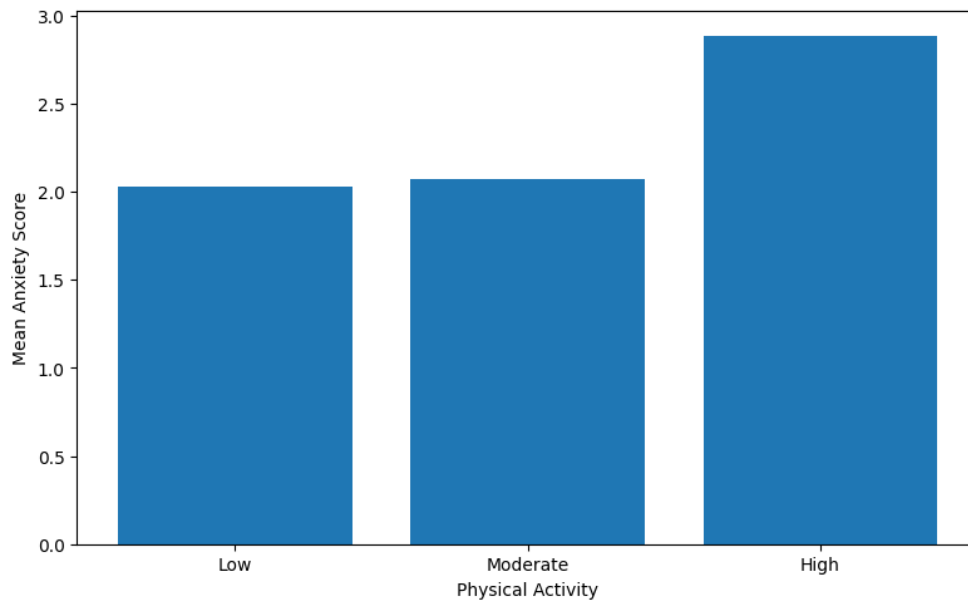
The graphs illustrated in Figures 2 and 3 have differences between mental health effects according to lifestyle determinants. The graph presented in Figure 2 indicates that there were significant differences in the mean stress levels of sleep quality groups, whereby those who have low quality sleep experienced higher stress levels compared to those with average or good sleep quality. This suggests that sleep quality may be an important factor in our lifestyles regarding psychological health.



**Figure 2.** Mean Stress Levels Across Categories of Sleep Quality

In addition, Figure 3 shows the variations in anxiety score levels depending on physical activity levels. Low physical activity was correlated with higher levels of anxiety, while higher levels of physical activity were associated with lower levels of anxiety. The trend suggests that physical activity may have something to do with lower levels of anxiety for college students.

Although this is purely descriptive, it provides insights regarding the analytical focus of the study in that lifestyle, which includes physical activity and sleep, may help explain mental health differences.



**Figure 3.** Mean Anxiety Scores Across Levels of Physical Activity

### 3.5 Summary of Findings

Overall, the results indicate that the stress, anxiety, and depressive symptoms experienced by the individuals in the sample of college students were moderate, but the stress was the most prominent among all the psychological problems considered in this research. In particular, the sample could be described based on the differences in academic background, moderate lifestyles, and different levels of social support. According to the results of correlation analysis, financial stress and academic load can be recognized as critical factors associated with mental health and stress and anxiety, respectively. Additionally, the results obtained through the graphical analyses revealed the role that different aspects of lifestyle might play for the mental health of individuals under study.

### 4. Discussion

The goal of the present study was to examine the notion of mental health and the link between it and educational and lifestyle aspects in university students. According to the data received, it can be stated that stress, anxiety, and depression among students were moderate, but stress became a major problem. One of the most interesting findings is the high relationship between financial stress and general stress level because it proves that financial burdens affect mental well-being. Moreover, academic workload, which was measured by semester credit load, had a strong relation with anxiety,

which suggests that the greater the academic demands, the greater the levels of psychological distress.

There were also patterns of lifestyle factors that were found to be significant. Though the relationships were mainly descriptive, the graphical analysis indicated that the stress level was related to poor sleep quality, whereas the physical activity level was related to high anxiety. These results are in line with the general evidence that lifestyle practices, including sleep and exercise, are key determinants of mental health. Moreover, the social support was found to be protective in nature with students who reported high levels of social support being more likely to have positive mental health outcomes. This helps to establish the fact that a combination of academic, behavioral and social factors determine mental health and not a single determinant (Akram et al., 2022).

This study can be compared to the earlier research that highlights the intricacy of mental health among university students. Academic stress, as an example, has been a known source of psychological distress long before the post-pandemic period, when academic expectations have risen (Roberts et al., 2023). Similarly, the correlation between financial stress and mental health, which is identified, is congruent with the earlier studies that emphasized the relevance of economic strains on the well-being of students (Bickerdike et al., 2019).

The existing literature on the subject also emphasizes the role of lifestyle-related elements, particularly sleep and exercise. Previous studies have proven that the quality of one's sleep has been linked to their psychological state, and bad sleeping habits contribute to the feeling of stress and anxiety (Xiao et al., 2020). Similarly, physical activity has been found to be linked to better mental health, which supports the trends in this research (Bailey et al., 2022).

Moreover, the effectiveness of social support in mitigating effects found in the current study is consistent with the earlier research finding that strong social networks help to overcome the negative consequences of stress (Oh et al., 2021). The general results, thus, are consistent with the current empirical data, which supports the applicability of the results to the overall context of the research.

The results of the research add to the theoretical perspective on mental health by proving its multidimensional nature. Instead of being influenced by one factor, mental health outcomes in university students are determined by the combination of academic pressures, lifestyle behaviors, and social contexts. It is consistent with the modern mental health research views that focus on the combination of psychological, behavioral, and environmental determinants (Alvarez-Subiela, 2022).

Also, the findings substantiate the models that understand mental health as a dynamic and contextual construct, which is impacted by both internal and external factors. The identified relationships between academic workload, lifestyle behaviors, and mental health outcomes show that theoretical frameworks that can explain such interconnected factors are required. Also, the results highlight the importance of self-efficacy and coping strategies as possible intermediaries in the correlation between stressors and mental health as proposed in previous studies (Ampuero-Tello et al., 2022).

The results have significant policy implications to institutions of higher learning and policymakers. First, universities need to focus on improving the mental health support services, such as counseling and peer-support programs. There is evidence that applications of structured interventions can decrease stigma and enhance mental health outcomes in students (Conley et al., 2020).

Second, healthy lifestyle behaviors should be encouraged as a part of student well-being programs. Regular physical exercises, sleep hygiene, and healthy eating habits may help to achieve improved mental health results (Bailey et al., 2022; Xiao et al., 2020).

Third, academic institutions must think of ways to balance academic workload and to eliminate undue pressure on students. Flexible academic designs and conducive learning conditions can be used to alleviate anxiety related to high credit loads. Lastly, the effectiveness and accessibility of support services can be improved through the implementation of digital mental health interventions, especially when dealing with a substantial number of students (Philippe et al., 2022).

The study has various shortcomings despite its contributions. First, the sample size is comparatively small ( $n = 100$ ) and it can be a limitation to the generalizability of the findings. Second, the cross-sectional design limits the possibility to make inferences about causal relationships of variables. Third, self-reported data can be subject to response bias because the perceptions of participants might not be accurate representations of their behavior and mental health. These are the limitations that should be taken into account when interpreting the results (Amanvermez et al., 2023).

Further research should aim to address the constraints in order to carry out more comprehensive research using bigger and more diverse samples to enhance generalizability. It is also recommended to conduct longitudinal studies to examine how mental health changes with time and evaluate the cause-effect relationship of academic, lifestyle, and social variables. In addition, the use of standardized psychological tests and sophisticated methods of analysis may provide a deeper understanding of the mental mechanism of mental well-being. The additional research on the interventions that would utilize evidence-based practices, especially digital-based ones, will lead to the enhanced mental health of students.

## 5. Conclusion

The research has discussed mental health and how it is related to academic, lifestyle and social issues in college students. The findings revealed that students were moderately stressed, anxious, and depressed and the stress factor was the most expressed mental health problem. The findings further established that mental health is strongly linked with various interrelated factors. The academic pressure, especially the increased semester credit load, was associated with the increased anxiety, which suggests the psychological burden of academic demands. Also, there was a strong correlation between the level of stress and financial stress that demonstrates the importance of economic hardships in the determination of the welfare of students. Even lifestyle behaviours had a significant role to play in determining the mental

health outcomes. Lower quality of sleep and physical activity were related to increased stress and anxiety, indicating that daily habits are highly influential in psychological well-being. Additionally, the findings showed that the variables of social environment, particularly social support could be employed as protective variables, and they can mitigate mental health problems among students. Overall, the study brings out the complexity of mental health among university students and the fact that it is not explainable outside of academic, behavioral, and social backgrounds. The results indicate the importance of integrated student support systems that include academic management, lifestyle interventions, and social support systems. Universities are advised to implement holistic measures that support mental health to make sure that students are well supported to cope with academic stresses and lead a healthy lifestyle.

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