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# Academic Performance (CGPA) Influences Mental Health: A Study of Students at Seremban Medical Assistant College (SMCA)

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**Abstract:** Medical students, especially in Malaysia, face many challenges due to their field of study and expectations of their profession. It is widely acknowledged that medical courses are among the hardest academic pursuits. In Malaysia, medical students must undergo a five-year undergraduate program, continuing with a clinical rotation and practical experience to sharpen their knowledge and skills. Despite the awareness given, the stigma of mental health persists, leading medical students to hesitate in seeking help out of fear of being perceived as weak. The study identifies whether mental health influences academic performance (CGPA) among medical students at Seremban Medical Assistant College (SMCA). This study used a quantitative method, and a questionnaire was distributed to 215 respondents. The data were analyzed using the Statistical Package for Social Science (SPSS). It was found that there were significant areas where CGPA influenced the mental health of SMCA medical students. Specifically, it was observed that as CGPA increased, there was a corresponding decrease in mental health among the students. This shows that the students are experiencing mental health issues due to their responsibility to maintain a good academic performance in their field of study. In addition, this study offers valuable insight to health practitioners and students on the importance of maintaining mental health and helps in raising awareness.

**Keywords:** *Academic Performance, CGPA, Mental Health, Medical Students*

## 1. Introduction

The prevalence of mental health issues in Malaysia is increasing over time. University students are not exempt from this trend. In 2019, it was found that medical students enrolled in public universities across Malaysia experienced mild to moderate depression. In 2020, nearly 30% of medical students in Malaysia reported high levels of stress associated with depression and anxiety (Kotera et al., 2020). This alarming increase highlights the urgent need for implementing interventions and support systems to address mental health concerns among university students in Malaysia. Awareness of mental health should be expanded among medical students, particularly those seeking help for mental health, behavioral, and unusual psychological experiences. This underscores the need to emphasize the importance of this matter among medical students in both public and private universities in Malaysia.

Universities are where students seek knowledge, skills, and experience. The curriculum provided by the Ministry of Higher Education (MOHE) serves as a reference for all public and private universities, polytechnics, and community colleges to meet the nation's aspirations to position Malaysia as a hub of excellence in international higher education. In Malaysia, there are 20 public universities divided into several categories: five research universities, four comprehensive universities, and eleven universities focused on and regulated by MOHE (MyGov), along with 50 private universities. The objective is to facilitate knowledge transfer, encompassing communication, critical thinking, teamwork, multitasking, leadership, and creativity. According to Ahmad et al. (2022), these skills are important to enhance employability for fresh graduates to be well-equipped with the competencies that are expected by public and private entities. Employability skills are important qualifications that are needed by a graduate to secure a job or career. Graduates from universities tend to earn 35% more than college leavers (Team, 2021). In addition, the cumulative grade point average (CGPA) is one of the key indicators of an individual's success in securing positions within organizations.

The CGPA often measures students' academic performance (Yogendra & Andrew, 2017). It is used to examine all examination grades across all semesters throughout the university study period. It also serves as a benchmark for future educational and career prospects (Ali et al., 2009; Ram, 2023). The past researcher revealed the importance of CGPA, which contributes benefits to education institutions, management programs, lecturers, students, and the development of employable graduates (Mutalib et al., 2019). To achieve a good result, practicing a healthy lifestyle is a must. A student needs to balance their life by prioritizing their health, including participating in physical activity, food intake, and stress management.

A healthy lifestyle leads to significant student performance, including mental health and well-being (Hautekiet et al., 2022). Poor mental health has become serious in many countries, especially among university students. Malaysia is one of the countries in Asia-Pacific that experienced these issues in mental health problems, negative mental health attitudes, and lower self-compassion and resilience than UK students (Kotera et al., 2020). Hezmi (2018) found that the rate of Malaysian students who endure this problem doubled in less than a decade, from 10% in 2011 to 20% in 2016. For example, approximately 30% of medical students in Malaysia (n = 761) reported a high prevalence of stress (Yusoff et al., 2010) and a high level of depression, anxiety, and stress. However, it is found that mental health in Malaysia has been increasing, especially among university students (Ministry of Health, 2016). This finding found proof that critical issues happen among university students, especially in mental health, as a result of pressure associated with maintaining academic performance.

Student performance plays a vital role in education. It measured the students' understanding based on the curriculum set up by the MOHE. Conversely, poor performance needed additional support, including lecturing monitoring and some changes in teaching methodologies and motivation. Thus, to measure the effectiveness of curriculum on student performance, the cumulative grade point average (CGPA) and mental health are important factors in ensuring their academic performance.

## 2. Literature Review

### Cumulative Grade Point Average (CGPA)

The CGPA is used as a weighted average of the grades obtained across all courses undertaken in their academic program. In Malaysia, this system accesses student academic performance, including medical students, in public and private universities. The impact of CGPA on students' lives, education, and career development, especially medical students in Malaysia, is significant. Students often perceive their CGPA as a determinant of their future career journey after studying. This thought will lead them to focus on maintaining their academic grades (Sarwar, 2016), including undergraduate medical students (Alam et al., 2023). Many factors can influence CGPA achievement, such as gender, level of family income, social environment, time spent studying, and mental health. Balancing academics and a healthy lifestyle in the context of mental health is needed to ensure student performance.

### Mental Health

Mental health remains a significant issue in Malaysia, compounded by prevailing stigmas surrounding attitudes towards mental health issues. The study about mental health from 1996 to 2019 found that this problem always relates to a dominance of supernatural and religious etiologies (Munawar et al., 2021). Other than that, other contributing factors to mental health concerns include social, economic, and educational. Based on Mental Health and Substance Use (MSD), 2014 found that mental health is determined by various factors such as social, economic, and physical environments that operate in different stages of life.

### Depression, Anxiety and Stress (DAS)

According to Otte et al. (2016), depression can be categorized as a severe mental health condition that is characterized by a feeling of sadness, loss of interest, impaired cognitive function and physical symptoms that lead to changes in appetite and sleep disorder. In any case, depression is negative because it tends to make the person feel detached from his surroundings (Sazali et al., 2021). A past study found that there is a significant association between depression and self-reported academic performance among medical students in Camerron (Ngasa et al., 2017). This finding has also been supported by Sousa et al. (2018) who found just as anxiety, and depression have potential negative impacts on academic performance among Portuguese

medical students. However, previous research by Bi et al. (2022), revealed there is a negative correlation between depression and academic performance. Similarly, Poudel (2024), accentuates that depression can affect cognitive functioning, attention, memory, and decision-making and influence academic performance.

Anxiety can be defined as a state of excessive worry or fear that an individual feels drains (Howren et al., 2020). Akinsola & Nwajei (2013), highlight the higher level of anxiety associated with the lower of academic performance and effect student's mental health condition. Worry and working factors found as mediating factors that contribute to anxiety and academic performance (Owens et al., 2012). Yet, academic success also can be seen as a protective factor against depression and anxiety. A study by Song (2023) found that failure in academic performance is a risk factor while improvement in academic performance is a protective factor against depression and anxiety.

Araiza and Lobel (2018), explain stress can happen when an individual perceives demand more than available resources. Findings from Kotter et al. (2017), stated unfavorable stress contributes to no negative stress in academic performance among undergraduate medical students. However, to another researcher, stress is acknowledged as one factor that can impact mental health and academic performance. Idaris (2022), indicates stress can lead to impaired academic performance and mental health.

As it relates to mental health, in Malaysia, mental health issues among medical students have been a subject of concern in both public and private universities (Ching et al., 2023). A decade ago, there were findings about the mental health of medical students, such as the prevalence of depression and anxiety among medical students in private universities (Saravanan & Wilks, 2014). Past researchers found that a significant proportion of medical students experienced depression, anxiety, and stress. The prevalence showed 40.5%, 46.0%, and 30.9%, respectively (Ching et al., 2023). This proves that mental health can influence students' CGPA.

Students' undergraduates also experienced higher levels of depression, anxiety and stress which affected their academic performance (Amalina et al., 2018). A study conducted at the University of Cyberjaya revealed stress levels among medical students exhibited an inverse correlation with CGPA (Hamdan et al., 2021). Furthermore, it is proven that depression, anxiety and stress significantly affect academic performance (Widiasari, 2024). Therefore, it is important to monitor the mental health of these students since these groups will lead and be leaders in the future.

## 3. Methodology

This study aimed to investigate the impact of mental health status on CGPA among students at Seremban Medical Assistant College (SMCA). A cross-sectional study was conducted among 217 undergraduate students aged between 20 and 26 years. A questionnaire consisting of 21 items from The Depression Anxiety Stress Scales (DASS) by Lovibond and Lovibond (1995) was used to measure the mental health status of the respondents. Mental health status was assessed based on levels of stress, anxiety, and depression, while CGPA was used as a measure of academic performance. Responses were evaluated using a four-point Likert scale, where 1 represented "did not apply to me at all" and 4 indicated "applied to me very much or most of the time."

Additionally, a pilot study was conducted to measure the reliability of the instrument, adapting the rule of thumb from Ahady et al. (2017). A total of 30 respondents participated in the pilot study. Based on the findings, Cronbach's alpha was 0.955, which according to Ahady et al. (2017) indicates excellent reliability.

## 4. Results and Discussion

**Table 1: Regression for the CGPA influences the Mental Health**

| | Unstandardized B | Unstandardized Std. Error | Standardize Beta | t | Significant |
|---|---|---|---|---|---|
| Constant | 3.740 | | | | |
| CGPA | -0.506 | 0.136 | -0.245 | -3.711 | 0.000 |
| $R^2$ | 0.060 | | | | |
| F | 13.771 | | | | |
| Significant | 0.000 | | | | |

Note: Significance level: 0.05 (2-tailed)
Dependent Variable: Mental Health

Based on the table above, the finding showed the linear model was significant where CGPA had a significant influence on mental health. This is because, it was found that the p-value = 0.000 less than $\alpha = 0.05$, so, the CGPA had a significant influence the mental health ($t(215) = -3.711$, $p < 0.05$). Meanwhile, a 1-unit increase in CGPA would decrease mental health by 0.506. In summary, the result has supported and accepted that CGPA has a significant influence the mental health. The results indicated that the CGPA explained 6 percent of the mental health ($R^2 = 0.060$, $F = 13.771$, $p < 0.05$).

Mental health issues among university students are crucial, as they are related to academic performance, typically measured using the CGPA. Strong academic performance is an indicator of students' success, and it is a pillar of national development. Based on the findings, CGPA was identified as one of the factors contributing to an impact on mental health among students at Seremban Medical Assistant College (SMCA). Past researchers revealed the same results: CGPA can impact overall mental health among undergraduate healthcare students (Tripathi et al., 2022) and indirectly affect their academic performance (Samsudin & Tan, 2016). However, there are findings by Manchri et al. (2017), Mohamad (2018), and Sadry et al. (2022) contrary to these findings, where there is no significant correlation between academic performance (measured by CGPA) and mental health, with conclusions that mental health did not significantly impact their academic performance. Due to this finding of dissimilarity, the researcher found that the student background is a factor that contributes to the different results; in this current study, the sample of the study comprises students with a medical background who face challenges related to mastering medical terms, knowledge, and clinical skills. According to Picton et al. (2022), first-year medical students are juggling mental health issues and acute crises, such as personal and health issues that disturb their studies. In contrast, previous research included a sample drawn from diverse academic programs such as education, business management, accounting, finance, and international business. These students, predominantly from social science disciplines, are frequently engaged in research projects, exams, and coursework (Azim, 2021). Consequently, these differing backgrounds may contribute to variations in results, given the disparity between the sample composition and the focus of the current study.

Moreover, the weighting of the courses and programs also contributes to the disparities, given the focus of the current study on the medical field compared to the previous study's emphasis on social sciences. As noted by Hill et al. (2018) and Picton (2021), medical students often contend with elevated levels of stress, burnout, and a demanding workload due to the rigorous curriculum and clinical training, which are known contributors to mental health challenges (Chang et al., 2018). Nevertheless, social science students typically perceive their courses as less stressful and more relaxed. Taking this factor into account, it is conceivable that the divergence in academic environments and atmospheres may explain the differing findings (Bolinski et al., 2020).

Furthermore, the number of samples and geographical area of the present study and past study contribute to the differences in results. The location of the present study is in Negeri Sembilan, Malaysia, while the past studies in 2017 were conducted in Iran with a sample size of 270 students, more than 50 students compared to the current study. The sample from the past studies in 2022 comprised students from the faculty of medicine and education, which led to the differences in results, whereas in this current study, the sample is

totally from students in the medical area. These distinctions of geographical area and the number of samples can affect the results; this is aligned with Robinson et al. (2009), Wang et al. (2012), and Bergsten et al. (2012), who revealed that the distribution of samples geographically and sample size can influence and impact the results observed in studies.

## 5. Conclusion and Recommendations

Mental health influences the CGPA of medical students. Based on this research, the researcher can conclude that the weight of courses and programs, especially in the medical field, contributes to student mental health since this field is important not only to the country but to society. This medical area produces medical professionals, including doctors, nurses, and researchers, who we as citizens rely on to save lives, improve health outcomes, and advance medical science. Therefore, fostering motivation and understanding toward these groups is essential to ensure their academic success and completion of studies. More research should be done regarding this issue, especially on how to create a supportive environment, promote mental well-being, and reduce the stigma associated with medical students and mental health issues concerning preventive measures, policies, support systems, and personal consultations.

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