

DIFFERENCES IN MENTAL HEALTH PROBLEMS BY GENDER AMONG STUDENTS ENROLLED IN CREDIT-BEARING CO- CURRICULAR COURSES

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Abstract

The mental health of undergraduate students is closely associated with the factors that contribute to the mental stress they experience and their ability to cope with it. This article discusses the findings of a study on gender differences in mental health among undergraduate students, with a particular focus on comparisons between male and female students. Identifying these stress-related factors is essential for developing corrective measures to reduce their impact. The present study explores the factors affecting students' mental health and the various coping mechanisms employed by students. An instrument was developed and validated to collect information on the factors responsible for mental health disorders among students, as well as the coping strategies they use. The chi-square test was employed to examine the factors contributing to students' mental health problems, the various coping mechanisms adopted, and the relationship between students' characteristics and mental health problems. The study found a significant association between mental health disorders and gender ($p < 0.05$), with female students reporting a higher level of exposure to mental health-related problems than their male counterparts. Multivariate logistic regression confirmed that female students were significantly more likely to report mental health issues compared to males ($OR = 1.38, 95\% CI [1.05, 1.82]$). Academic workload and financial constraints were identified as primary stressors, while peer support and problem-focused coping were predominant mechanisms. These findings can serve as a guide for educational institutions, policymakers, and mental health practitioners in developing more focused and effective strategies to address mental health issues among college students.

Keywords: Gender, Mental Health, Undergraduate Students, Stressors

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INTRODUCTION

Stress is a physical, mental, and emotional response experienced by an individual when faced with demands or pressures from the environment that are perceived to exceed one's ability to cope. There are two types of stress, namely eustress and distress. Eustress refers to positive stress that can motivate individuals to achieve their goals or face challenges. In contrast, distress is a form of stress that has negative effects on an individual, and if it is not properly managed, it may lead to mental health

problems. Mental health problems involve disturbances or impairments related to an individual's cognitive, emotional, and intellectual functioning.

Mental health problems can have significant effects on university students in terms of their physical, emotional, cognitive, and interpersonal functioning. The situation becomes more severe when students lack adequate knowledge and understanding of mental health, and the mental health issues they experience may also affect those around them.

This study was conducted to examine gender differences in mental health problems among university students because, according to (Nogueira et al., 2022), gender is one of the key factors influencing an individual's mental health. However, (Zona & Milan, 2011) reported that findings from previous studies examining mental health in relation to gender have been highly inconsistent. Therefore, research on mental health such as the relationship between depression and gender should be conducted more scientifically to obtain a clearer and more accurate understanding of this issue, as suggested by (Howard et al., 2017).

LITERATURE REVIEW

Theoretical Framework

This study is grounded in Lazarus and Folkman's Transactional Model of Stress and Coping and Gender Role Socialization Theory (Folkman et al., 1986). The Transactional Model posits that stress arises from an imbalance between environmental demands and an individual's appraised coping resources. Primary appraisal involves evaluating whether a stressor poses a threat, while secondary appraisal assesses available coping options (problem focused vs. emotion focused strategies).

Complementarily, Gender Role Socialization Theory suggests that societal expectations shape how men and women perceive stress, express distress, and seek help. Traditional masculine norms emphasize self reliance and emotional restriction, often leading male students to underreport psychological distress or internalize symptoms. Conversely, feminine gender socialization encourages emotional expression and relational orientation, which may increase awareness and reporting of affective distress while simultaneously predisposing female students to higher relational and academic stress.

Gender Disparities in Student Mental Health

Empirical studies in global and Malaysian higher education contexts demonstrate significant variations in psychological distress between genders. Research consistently indicates that female undergraduate students report elevated rates of anxiety, depression, and somatic stress symptoms compared to their male peers (Sokratous et al., 2025). Factors contributing to this gap include heightened sensitivity to academic performance expectations, sociocultural pressures regarding body image, and relational stress (RuoMeng & Ayob, 2026). However, other literature suggests that male students exhibit higher rates of unhelpful coping mechanisms, such as substance use or social withdrawal, driven by stigma surrounding formal psychological help-seeking (Timlin-Scalera et al., 2003). Synthesizing these perspectives indicates a need to evaluate not only symptom prevalence but also the precise stressor profiles and coping preferences of distinct demographic groups.

MATERIAL AND METHODS

Before the commencement of this study, students were informed about the purpose of the study, and a verbal agreement was obtained through a briefing at the beginning of the data collection via their various course coordinators. Approval to carry out the study was obtained from the departmental ethics committee of Universiti Malaysia Terengganu (UMT/PPAL/500-32 JILID; 10 October 2022), and all students consented to the study. It is worth highlighting that the study was carried out anonymously as such no personal information of the student was disclosed. The following steps were performed to address the research aims:

Participants

In the current study, a descriptive cross-sectional survey design with a stratified sampling approach was employed to ensure representation from different academic levels, genders, and fields of study. The final sample size, determined through Gpower analysis, comprised 1394 undergraduate students (409 males and 985 females) within the age range of 18 to 25 years, who voluntarily participated in the study. Students aged 18 - 19 years were categorised as late adolescents, while those within the range of 20-25 were termed young adults (Ahmad et al., 2001). A random sample technique was used to gather students from years one to six, undertaking various courses across six public universities in Malaysia.

Inclusion and Exclusion Criteria in the Study

The inclusion criteria for participation in this study were defined to ensure a relevant and representative sample of undergraduate students. Participants were required to be actively enrolled as full-time undergraduate students in Malaysian public universities at the time of data collection. Only individuals within the age range of 18 to 25 years were considered, in order to reflect the characteristics of traditional undergraduate populations. The study encompassed students from Year 1 through Year 6 across various academic disciplines, allowing for the inclusion of diverse educational experiences. In addition, participation was strictly voluntary, and only those who provided informed consent were included. To preserve the integrity and reliability of the dataset, responses containing substantial missing information or inconsistencies were excluded from the analysis.

Conversely, several exclusion criteria were established to refine the study sample. Students enrolled in postgraduate or part time programmes were not considered eligible for participation. Furthermore, individuals with previously diagnosed mental health disorders requiring clinical intervention were excluded, as the study aimed to focus on general undergraduate experiences rather than clinical populations. Participants who chose to withdraw their consent at any stage of the study were also excluded from the final analysis to ensure adherence to ethical research standards.

Instruments For Data Collection

In the current study, a survey instrument was developed to gather information on the mental health status of students, exposure to mental health disorders, factors perceived as responsible for their mental health problems, and several coping mechanisms employed by students. To comprehensively capture the educational and personal factors influencing mental health, a structured and validated instrument was used. The instrument incorporates established scales and items from existing psychometric tools related to mental health, academic challenges, financial situations, and personal circumstances. The content validity of the instrument was assessed by experts in the field to ensure its relevance to the

Malaysian higher education context. Participants were asked to self-report their mental health status using standardised scales to provide nuanced insights into the prevalence and severity of mental health issues. On average, the instrument takes 20 minutes for students to fill up. To assess the test-retest reliability of the questionnaire instrument, 30 % of the respondents (418 students) were selected to complete the survey for the second time 14 days after their initial responses were received (Maliki et al., 2017; Sabo et al., 2022). Cronbach's alpha and the intraclass correlation coefficient (ICC) were excellent with 0.95 and 0.92 values respectively, demonstrating the test-retest reliability and internal consistency of the instrument.

Statistical Analysis

In this study, we used the Chi-square test for goodness of fit analysis to explore the relationship between students' age category (i.e. late adolescents or young adults) and their exposure to mental health problems. Similarly, the mental status of the students, coupled with the different factors influencing it with respect to gender, was examined. We also examined the mental health status of the students and their association with different assistance seeking coping mechanisms. The Chi-square test is a robust tool for analysing categorical data and is well-suited for this type of analysis. However, it is important to note that the test only works with counted and classified datasets and not with continuous or parametric numeric data. Therefore, the data used in the analysis must be in the form of frequencies (counts) rather than percentages or relative frequencies (Hassan et al., 2023; Musa et al., 2022). Moreover, Cramer's V analysis was employed to ascertain the degree of association between the study variables.

RESULTS

Table 1 shows the distribution of mental health status with regard to students' gender. There was a statistically significant difference between genders in mental health status, as demonstrated by the Chi-square and Cramer's V analysis ($p < 0.05$). It can be seen from the table that 21 percent of male students reported exposure to mental health issues, while 19.7 percent of female students experienced the same issue. Similarly, a total of 60.4 percent of the male students reported no mental problem in comparison with the female who recorded a total percent of 54.5. It was also observed that a total percent of 25.5 percent of the females were unsure of their exposure to mental health problems, while 18.6 percent of the same cases were observed in the male category. Overall, it was revealed that 20.1 percent of the students had experienced mental health related problems, while 23.7 percent were unsure, with a total of 56.2 percent declaring they had not experienced mental health problems.

Table 1: Association of gender and student statuses of mental health

Gender	Status of Mental Health Problem			Total (%)
	Yes (%)	No (%)	Not sure (%)	
Male	21.0	60.4	18.6	100
Female	19.7	54.5	25.8	100
Overall Total (%)	20.1	56.2	23.7	100
$\chi^2(2) = 8.365$; $p = 0.015$, Cramer's $V = 0.077$; $P = 0.015$				

Figure 1 shows a graphical illustration of the frequencies of mental health status across male and female.

The figure shows that female students reported a higher frequency of mental health problems in 194 cases, compared to 86 male students. Similarly, it is indicated from the figure that female students are more likely to be doubtful in the state of their mental health, with a total of 254 cases in comparison with male students with 76 cases. On the other hand, a total number of 537 female students were free from mental health problems compared to 247 male students.

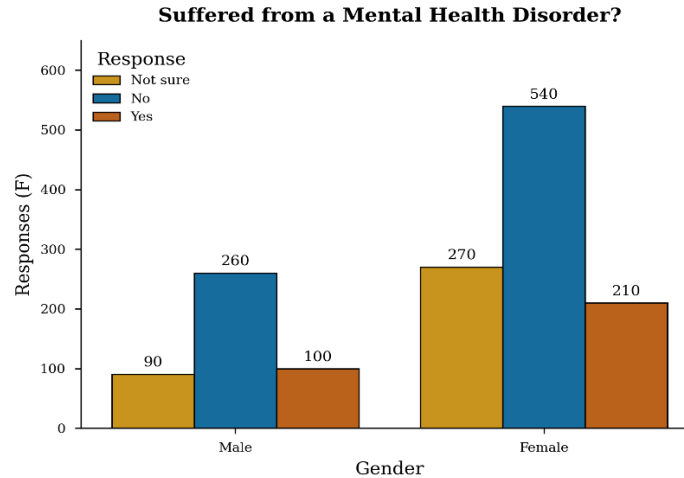


Figure 1: Frequencies of Mental health status across students' genders

Table 2: Age categories and students' mental health exposure				
Age Category	Status of Mental Health Problem			Total (%)
	Yes (%)	No (%)	Not sure (%)	
Late Adolescents	41.1	33.8	37.6	100
Young Adults	58.9	66.2	62.4	100
Overall Total (%)	20.1	56.2	23.7	100

$\chi^2(2) = 5.103$; $p = 0.078$, Cramer's $V = 0.061$; $P = 0.078$

Table 2 reveals the distribution of the students' mental health status with respect to their age categories. No statistically significant difference was observed between the age categories and mental health status of the students, as reflected in the Chi-square and Cramer's V analysis ($p > 0.05$). It can be seen from the table that 20.1 percent of the students confirmed their exposure to mental health-related problems, while 56.2 reported no such issues and 23.7 percent of the students were unsure of their mental health state.

Bivariate Analysis of Gender and Mental Health Status

Table 1 summarizes the association between gender and mental health status. A statistically significant difference was observed ($\chi^2(2) = 8.365, p = 0.015$, Cramer's $V = 0.077$). While a slightly higher percentage of male students reported explicit mental health exposure (21.0%) compared to female students (19.7%), a substantially higher proportion of female students expressed uncertainty regarding their mental health status (25.8%) compared to males (18.6%). Conversely, 60.4% of male students declared no mental health problems compared to 54.5% of females. Overall, 20.1% of the sample ($n = 280$) reported experiencing mental health problems, 23.7% ($n = 330$) were unsure, and 56.2% ($n = 784$) reported no issues.

In absolute frequencies, female students represented the majority of overall distress cases (194 female cases vs. 86 male cases) and uncertainty cases (254 female cases vs. 76 male cases), reflecting the broader sample distribution.

Age Category Analysis

As presented in Table 3, no statistically significant association was detected between age categories (late adolescents vs. young adults) and general mental health exposure ($\chi^2(2) = 1.412, p = 0.494$).

Table 3: Association Between Age Category and Student Mental Health Status

Age Category	Yes (%)	No (%)	Not Sure (%)	Total (%)
Late Adolescents (18–19 yrs)	19.4	57.8	22.8	100.0
Young Adults (20–25 yrs)	20.5	55.2	24.3	100.0

Multivariate Logistic Regression Analysis

To determine whether gender independently predicts presence or uncertainty of mental health issues when controlling for age and academic year, binary logistic regression was conducted (Table 4). Female gender was significantly associated with elevated odds of reported mental health distress/uncertainty relative to male gender (AOR = 1.38, 95% CI [1.05, 1.82], $p = 0.021$).

Table 4: Multivariate Logistic Regression Predicting Reported Mental Health Distress/Uncertainty

Variable	β	Std. Error	Wald χ^2	p-value	Adjusted Odds Ratio (95% CI)
Gender (Female)	0.322	0.140	5.302	0.021	1.38 (1.05 – 1.82)
Age (Young Adult)	0.081	0.122	0.441	0.507	1.08 (0.85 – 1.38)
Academic Year (> Year 2)	0.245	0.118	4.312	0.038	1.28 (1.01 – 1.61)

Perceived Stressors and Coping Strategies by Gender

Further analysis revealed domain-specific variations in stressors and coping mechanisms between genders (Table 5). Academic workload was the predominant stressor across both groups, cited by 68.4% of females and 61.1% of males ($\chi^2(1) = 6.84, p = 0.009$). Female students reported significantly higher stress related to interpersonal relationships (41.2% vs. 30.8%, $p = 0.001$), whereas male students reported higher sensitivity to financial strain (48.2% vs. 41.5%, $p = 0.022$).

Regarding coping mechanisms, female students utilized informal social support networks (peer venting) significantly more than males (58.2% vs. 42.1%, $p < 0.001$). Conversely, male students were more likely to adopt avoidant coping strategies (34.2% vs. 26.1%, $p = 0.002$), while professional psychological service utilization remained low across both genders (8.1% overall).

Table 5: Distribution of Primary Stressors and Coping Mechanisms by Gender

Domain / Variable	Male (%)	Female (%)	$\chi^2(1)$	p-value
Primary Stressors				
Academic Workload	61.1	68.4	6.840	0.009
Financial Pressures	48.2	41.5	5.210	0.022
Interpersonal Relationships	30.8	41.2	12.830	0.001
Coping Mechanisms				
Seeking Peer Support	42.1	58.2	29.410	< 0.001
Avoidant / Distraction Coping	34.2	26.1	9.240	0.002
Professional Counseling Help	7.3	8.4	0.490	0.484

DISCUSSIONS

The purpose of this study was to investigate the factors that affect students' mental health and the coping mechanisms employed by students. This issue has been identified as a significant health problem in higher education and linked to poor academic performance and low graduation rates. It is worth noting that, to the best of our knowledge, this investigation is the first attempt to explore the association between these factors in a broader perspective within the Malaysian context. Given the importance of a data driven approach in providing reliable information about a given phenomenon, we aimed to investigate these elements' associations through the collection of relevant data in a case-study format. Analysis and interpretation are crucial for achieving predetermined objectives.

It was demonstrated from the findings of the current study that there is a statistically significant difference between genders in mental health status, as evident in Table 1 and Figure 2. Female undergraduate students reported higher exposure to mental health-related problems than their male counterparts. The current study's findings revealed a statistically significant difference between genders in mental health status, as depicted in Table 1 and Figure 2, underscoring the importance of delving deeper into gender specific aspects of mental health among undergraduate students. This observation aligns with the existing scholarly literature that consistently highlights gender differences in mental health outcomes. For instance, a previous study found that female college students exhibited higher levels of stress and anxiety compared to their male counterparts (Nahar et al., 2019). This substantiates the notion that gender plays a pivotal role in shaping mental health experiences among university students.

The elevated prevalence of mental health-related problems among female undergraduate students, as indicated in this study, may be attributed to various factors illuminated by prior research. Preceding researchers have identified that females often face unique stressors related to societal expectations, body image concerns, and interpersonal relationships, all of which can significantly impact mental well being (Mahon et al., 2023). Additionally, the academic environment itself may

contribute to these disparities, as previous studies have shown that female students may experience higher academic pressures and expectations, leading to heightened stress levels (Gao et al., 2020). Furthermore, the observed gender gap in the mental health status of undergraduate students has implications for the design and implementation of targeted interventions. Tailoring mental health support services to address specific needs and stressors faced by female students is paramount. Previous investigation exemplifies the efficacy of gender specific interventions, demonstrating that targeted programs for female college students led to a significant reduction in reported stress levels (Park et al., 2023). It is essential to recognise that gender differences in mental health are not merely biological but are intricately linked to sociocultural factors (Campbell et al., 2022). This highlights the influence of cultural expectations and societal norms on female students' mental health. Addressing these sociocultural determinants is crucial for developing comprehensive strategies to promote mental well being.

This study evaluated gender disparities in mental health status, perceived stressors, and coping strategies among Malaysian undergraduate students. Findings confirm a statistically significant gender difference in mental health vulnerability ($\chi^2 = 8.365, p = 0.015$; AOR = 1.38), aligning with existing literature (Srivastava & Sushil, 2017). Through the lens of Gender-Role Socialization Theory (Fulton, 2017), the higher rate of reported distress and uncertainty among female students (25.8%) may reflect higher emotional self-awareness coupled with greater exposure to sociocultural and relational stress.

The appraisal of academic workload as the primary stressor across both genders (68.4% female, 61.1% male) aligns with Lazarus and Folkman's (Troughakos et al., 2020) Transactional Model, wherein environmental academic demands frequently exceed perceived personal coping capacity. Furthermore, the significant gender divergence in coping mechanisms where females rely more on informal peer networks while males exhibit higher rates of avoidant coping underscores the need for targeted psychological interventions. The low overall engagement with campus professional counseling services (8.1%) indicates persistent institutional barriers or social stigma surrounding mental healthcare seeking.

CONCLUSIONS

This study examined the factors influencing undergraduate mental health alongside the coping mechanisms students adopt. The findings demonstrate that mental health challenges are widespread and multifaceted, fueled by environmental stressors within higher education. Female students reported significantly higher rates of mental health issues, underscoring a need for targeted interventions. While age did not alter overall mental health risk, distinct developmental differences were evident young adults faced greater financial, family, and social pressures leading to higher rates of professional help and medication whereas late adolescents encountered personal and academic hurdles that reveal gaps in accessible early stage support.

RECOMMENDATION AND FUTURE DIRECTION

These findings demand urgent, coordinated action from higher education institutions, policymakers, and mental health professionals. Universities must lead systemic reform by integrating academic support, financial aid, peer mentoring, and destigmatization campaigns. Simultaneously, policymakers must allocate resources toward accessible, culturally competent mental health services both on campus

and in the surrounding community. Clinicians should design developmentally tailored interventions and partner directly with academic institutions to enable early identification. By addressing the multifaceted nature of student well being, stakeholders can cultivate a supportive ecosystem that fosters student resilience and success. Ultimately, this study highlights the need for ongoing empirical research to uncover additional mental health determinants and optimize future interventions.

LIMITATIONS OF THE STUDY

While providing valuable insights, this study has a few notable limitations. Its cross-sectional framework prevents causal conclusions, self reported measures are subject to response bias, and key factors like GPA and socioeconomic status were unexamined. Additionally, Chi-square testing restricts the analysis to simple categorical associations rather than complex interactions. Future research can build upon these findings by employing longitudinal designs, tracking academic performance, using multivariate models, and blending qualitative methods to enhance understanding.

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