

# Unveiling Mental Health Issues in Foundation Programs: A Study of Depressive Symptoms Among Universiti Malaya Students

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ARTICLE INFO	ABSTRACT
Received: 29 Dec 2024	<p>This cross-sectional survey investigated depressive symptoms among students at the Centre for Foundation Studies in Science, Universiti Malaya. The study sample consisted of 319 students, aged 18 to 19 years, with a gender distribution of 129 males (40.4%) and 190 females (59.6%).</p> <p>The participants were enrolled in two major programs: Asasi Sains Hayat (Life Sciences) with 159 students (49.8%) and Asasi Sains Fizikal (Physical Sciences) with 160 students (50.2%). Depressive symptoms were assessed using the Short Mood and Feelings Questionnaire (SMFQ), a 13-item measure evaluating symptoms over the past two weeks. The study employed descriptive statistics, t-tests, and two-way ANOVA to analyze the data, focusing on the prevalence and severity of depressive symptoms across genders and academic disciplines. The findings revealed a substantial presence of depressive symptoms, with 44.2% of students scoring above the clinical threshold. No significant interaction between gender and academic program was found, indicating a consistent pattern across demographics. However, Physical Sciences students reported higher levels of fatigue, restlessness, and self-deprecation, while Life Sciences students felt more inadequate in their abilities. These results highlight the importance of tailored mental health interventions at Universiti Malaya, offering crucial insights for policymakers and mental health professionals to enhance student support systems.</p> <p><b>Keywords:</b> Depressive Symptoms, Foundation Students, Mental Health, Short Mood and Feelings Questionnaire (SMFQ).</p>
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## INTRODUCTION

Mental health concerns among university students have become a critical issue, reflecting the global need to address psychological well-being in higher education. The transition to university life often brings emotional and cognitive challenges that can trigger or worsen mental health issues, particularly depression. This is especially true in foundation programs, which act as both a gateway to higher education and a potential source of stress impacting students' mental health.

In Malaysia, discussions about mental health in academic settings are evolving, with growing awareness of the importance of support systems for students. Universiti Malaya, as a leading institution, reflects this shift, focusing on addressing the mental health needs of its students. This study examines the Centre for Foundation Studies in Science at Universiti Malaya, which serves students at a pivotal early stage in their academic journey, making it an ideal setting for early mental health interventions.

This research uses a cross-sectional survey to assess depressive symptoms among students in the Life Sciences and Physical Sciences programs. The Short Mood and Feelings Questionnaire (SMFQ) is used to measure the prevalence and severity of depression, focusing on how these symptoms vary by gender and academic discipline. The aim is to provide a clear picture of current mental health challenges and pinpoint where interventions are most urgently needed.

Understanding the mental health challenges within foundation programs is crucial for designing effective, targeted interventions that can prevent the onset of depression and promote student well-being. This study aligns with broader mental health advocacy efforts and offers valuable insights into the specific needs of Universiti Malaya students.

The primary objective is to determine if depressive symptoms differ significantly between Life Sciences and Physical Sciences students and whether these differences are more pronounced in male or female students. By identifying program-specific and gender-specific trends in depression, this research aims to inform targeted mental health strategies for these academic disciplines.

## LITERATURE REVIEW

### A. Depression Among Youth Globally and In Malaysia

The increasing prevalence of depressive symptoms among university students has garnered significant attention in recent studies, reflecting a global trend of elevated mental health challenges within this demographic. A systematic review by [1] emphasized that the transition to university life introduces a range of stressors, such as academic demands, financial pressures, and social changes, which can trigger or worsen depressive symptoms, highlighting the critical need for early intervention during this vulnerable period. Globally, the incidence of depression among university students has been a growing concern, particularly in Southeast Asia, where approximately one-third of students have reported experiencing clinical depression [2].

In Malaysia, the mental health landscape within universities has seen a sharp rise in psychological distress among students over the past decade. According to [3] the percentage of students experiencing stress, anxiety, and depression has doubled, with nearly 30% of medical students reporting significant mental health issues. This alarming trend underscores the need for proactive, targeted mental health interventions within Malaysian educational institutions.

### B. Foundation Program at Universiti Malaya

Foundation programs, which aim to prepare students for the challenges of undergraduate study, can exacerbate stress due to their demanding academic nature. These programs are critical transitional phases where students undergo significant emotional and psychological adjustments. The intensity and competitiveness of foundation programs, particularly in academically rigorous environments like Malaysia, may increase the likelihood of mental health challenges unless adequate support systems are established.

Within Universiti Malaya, understanding the prevalence of depressive symptoms among foundation program students is crucial for developing tailored mental health services. Identifying the specific needs of these students can also inform policies designed to create a supportive learning environment. Research has indicated that different academic disciplines may place varying psychological burdens on students. [4] suggest that students in highly structured and demanding programs, such as the sciences, experience higher levels of stress and are more prone to depressive symptoms.

### C. Gender Differences

Gender differences in the prevalence and expression of depressive symptoms have been well-documented, with females generally exhibiting higher rates of depression during their university years [5]. This disparity may be influenced by a combination of biological, psychological, and social factors, including differences in stress response and societal expectations. [6] have posited that these gender-specific differences warrant tailored approaches in mental health interventions and support structures within educational settings. Conversely, societal expectations often pressure male students to conceal their emotional struggles, which can lead to the underreporting and underdiagnosis of depression in this demographic [7].

In conclusion, this review underscores the multifaceted factors contributing to depressive symptoms among university students, including academic pressure, gender differences, and program-specific stressors. The literature indicates a clear imperative for universities to not only understand but also actively manage the mental health challenges faced by their students. Effective intervention strategies and supportive policies that are tailored to the unique needs of different student groups are crucial. As posited by [8], the development of comprehensive mental health frameworks in educational institutions can significantly enhance student well-being and academic success. The present study seeks to expand on these findings by exploring these dynamics within Universiti Malaya's foundation programs, providing insights that could guide the development of targeted mental health interventions.

### METHODOLOGY

This study utilized a cross-sectional survey methodology to investigate the prevalence of depressive symptoms among students at the Centre for Foundation in Science, Universiti Malaya. The cohort included 319 students, consisting of 129 males (40.4%) and 190 females (59.6%), all aged between 18 and 19 years. These participants were distributed across two primary academic programs: 159 students (49.8%) were enrolled in the Asasi Sains Hayat, focusing on life sciences, while 160 students (50.2%) pursued the Asasi Sains Fizikal, dedicated to physical sciences.

The measurement of depressive symptoms in academic settings often utilizes various psychometric tools, with the Short Mood and Feelings Questionnaire (SMFQ) standing out for its specificity and conciseness in adolescent and young adult populations. As highlighted by [9], the SMFQ provides a robust measure for tracking depressive symptoms over time, making it suitable for evaluating the efficacy of mental health interventions within the university student population. Hence, to measure depressive symptoms, the Short Mood and Feelings Questionnaire (SMFQ) was employed. This instrument includes 13 items that evaluate the depressive symptoms experienced within the last two weeks. The response format of the SMFQ ranges from "Not True" (0) to "True" (2), where escalating scores reflect greater severity of depressive symptoms. The reliability of the SMFQ was corroborated by a Cronbach's alpha coefficient of 0.878, demonstrating substantial internal consistency.

The recruitment of participants was carried out using purposive and convenience sampling techniques, with invitations sent through student email lists. The survey was administered using Google Forms, which provided a secure and accessible platform for data collection. This method ensured the efficient distribution and completion of the survey, with each participant taking roughly 10 minutes to respond.

Data analysis was performed using SPSS Version 25. Descriptive statistics were utilized to outline demographic characteristics and the distributions of key variables, providing a foundational understanding of the study population and variables of interest. The independent samples t-test was performed to evaluate significant differences in depressive symptoms between the Life Sciences and Physical Sciences students, separated by gender.

### RESULTS AND DISCUSSION

Table 1 provides a summary of how foundation students at Universiti Malaya are feeling in terms of signs of depression. It lists different feelings such as being unhappy, feeling worthless, or thinking no one loves them, and shows how common these feelings are among the students. The table also shows how varied these feelings are among the students. Some feelings are experienced very differently by different students, suggesting that while some students might be struggling a lot, others might not be as affected.

**Table 1.** The students' responses across different depressive symptoms

Item Description	Mean	Standard Deviation	Not True	Sometimes	True
Felt miserable or unhappy	0.78	0.58	97	195	27
Didn't enjoy anything at all	0.47	0.60	185	117	17
Felt so tired just sat around and did nothing	1.04	0.72	76	153	90
Was very restless	0.98	0.69	80	166	73

Item Description	Mean	Standard Deviation	Not True	Sometimes	True
Felt I was no good anymore	0.76	0.75	135	124	60
Cried a lot	0.51	0.68	189	97	33
Found it hard to think properly or concentrate	0.95	0.70	86	163	70
Hated myself	0.62	0.74	169	101	49
Was a bad person	0.66	0.71	152	123	44
Felt lonely	0.78	0.73	127	134	58
Thought nobody really loved me	0.74	0.72	133	135	51
Thought I could never be as good as others	1.00	0.76	93	133	93
Did everything wrong	0.68	0.68	139	142	38

The first item, "Felt miserable or unhappy," shows a moderate mean score of 0.78 and a relatively low standard deviation of 0.58, suggesting that while many students report this symptom, the variation in the intensity of this feeling is not very wide. Most students (195) indicated experiencing this symptom "Sometimes," while 97 students said it was "Not True," and 27 marked it as "True."

In contrast, the item "Felt so tired just sat around and did nothing" has the highest mean score of 1.04, with a higher standard deviation of 0.72, indicating a wider spread of responses. This symptom appears to be one of the most frequently experienced, with 90 students marking it as "True" and 153 reporting it as "Sometimes," suggesting that fatigue and lack of energy are common depressive experiences among the participants.

Similarly, "Was very restless" also presents a high mean of 0.98 and a standard deviation of 0.69. The number of students who indicated this symptom as "True" was 73, while 166 reported it as occurring "Sometimes," demonstrating that restlessness is another significant indicator of depressive symptoms in the student population.

Some depressive symptoms, such as "Didn't enjoy anything at all" and "Cried a lot," display lower mean scores, 0.47 and 0.51, respectively. A large portion of the students (185 and 189) reported that these symptoms were "Not True," while relatively fewer students indicated these feelings as "Sometimes" or "True." These lower scores may indicate that while such feelings are present, they are not as prevalent or severe compared to other symptoms like fatigue or restlessness.

The symptom "Hated myself" has a mean of 0.62, suggesting moderate levels of self-critical feelings among the students, but with considerable variation (standard deviation of 0.74). Although 169 students marked this as "Not True," a substantial number, 101 students, felt this "Sometimes," and 49 students marked it as "True."

The statement "Thought I could never be as good as others" yielded a mean of 1.00, one of the higher averages in the table. This high score, combined with the fact that 93 students marked it as "Not True" while 133 marked "Sometimes," and 93 marked "True," indicates that many students struggle with feelings of inadequacy.

Similarly, "Felt lonely" scored 0.78 on average, with a standard deviation of 0.73, showing that loneliness is also a commonly experienced symptom. While 127 students marked it as "Not True," 134 experienced it "Sometimes," and 58 marked it as "True," suggesting that loneliness is a significant factor in the depressive experiences of many students.

Understanding these patterns can help the university to better understand where students are struggling the most and to provide appropriate support. For instance, since many students feel tired or think less of themselves, the university might focus on offering counselling or workshops that help students manage stress and boost their self-esteem. This approach ensures that help is tailored to the specific issues that students are facing.

The summary of the average scores for each depressive symptom, segmented by gender and program, from the analysis of depression signs among foundation students at Universiti Malaya is tabulated in Table 2.

**Table 2.** Average Scores by Gender and Program

Symptom Description	Male Life Sciences	Male Physical Sciences	Female Life Sciences	Female Physical Sciences
Felt miserable or unhappy	0.74	0.82	0.80	0.74
Didn't enjoy anything at all	0.54	0.49	0.44	0.46
Felt so tired just sat around and did nothing	0.98	1.06	1.02	1.10
Was very restless	0.96	1.03	0.94	0.99
Felt I was no good anymore	0.62	0.81	0.74	0.84
Cried a lot	0.38	0.30	0.64	0.62
Found it hard to think properly or concentrate	0.94	0.92	0.95	0.98
Hated myself	0.58	0.59	0.65	0.64
Was a bad person	0.78	0.70	0.61	0.62
Felt lonely	0.88	0.78	0.74	0.78
Thought nobody really loved me	0.70	0.71	0.81	0.72
Thought I could never be as good as other people	1.08	0.89	1.03	1.02
Did everything wrong	0.64	0.66	0.67	0.75

The analysis of depressive symptoms among foundation students at Universiti Malaya, segmented by gender and academic program (Life Sciences and Physical Sciences), reveals insightful patterns that could inform targeted mental health interventions. The data indicates varying levels of depressive symptoms, with some notable differences emerging between genders and programs.

Firstly, male students in the Life Sciences program exhibit higher incidences of feeling excessively tired and inactive, as well as a pronounced sense of underachievement compared to their peers. This could suggest a heightened vulnerability to emotional and motivational deficits within this subgroup, potentially exacerbated by the program's specific pressures or cultural expectations around male emotional expression. In contrast, males in the Physical Sciences program display higher restlessness and feelings of inadequacy, pointing towards possible anxiety-related symptoms that may be stimulated by the demanding nature of physical sciences.

Female students, on the other hand, report higher levels of internalized negative emotions. In the Life Sciences program, females notably feel a lack of self-worth and perceive a lack of love from others, which could be indicative of more profound social or interpersonal issues affecting their mental health. Females in the Physical Sciences program show higher restlessness and a tendency to be overly critical of themselves, suggesting a possible overlap of stress factors linked to academic demands and personal expectations.

The critical variance in symptoms between programs, particularly the elevated feelings of restlessness and inadequacy in the Physical Sciences program across genders, suggests that the academic environment and curriculum demands may significantly influence student mental health. This observation merits further investigation to understand the causal relationships between program specifics and student well-being.

Moreover, the overall higher reporting of certain depressive symptoms among females across both programs might reflect broader societal and psychological dynamics that predispose women to more frequently report or experience affective disorders. This aligns with existing literature that often shows higher prevalence rates of depression among females, possibly due to a combination of biological, social, and cultural factors.

In summary, the findings underscore the need for university mental health services to consider demographic and program-specific characteristics when designing interventions. There is a clear indication that both gender and academic discipline exert a substantial influence on mental health, which should guide the development of tailored support systems that address the unique challenges faced by different student groups. This approach not only promises more effective intervention but also supports a more nuanced understanding of mental health within the academic context.

The assessment of depressive symptoms among foundation students in university settings utilized the Short Mood and Feelings Questionnaire (SMFQ), scoring responses on a range from 0 to 26. The cut-off score of 11 or higher on the Short Mood and Feelings Questionnaire (SMFQ) has been used as a critical benchmark to classify students as experiencing high levels of depressive symptoms. This threshold is supported by research which indicates its high sensitivity and specificity, making it a reliable indicator of significant depressive symptomatology [10].

In our analysis, as detailed in Table 3, 141 students, approximately 44.2% of the sample, met or exceeded this threshold, suggesting that a significant proportion of students experience depressive symptoms severe enough to potentially require intervention.

**Table 3.** The distribution of depressive symptomatology statistics across different genders and programs

Gender	Program	Non-Depressed	Depressed	% Depressed	Total
Male	Life Sciences	28	22	44.00%	50
Male	Physical Sciences	45	34	43.04%	79
Female	Life Sciences	62	47	43.12%	109
Female	Physical Sciences	43	38	46.91%	81
			<b>141</b>		<b>319</b>

This high prevalence is relatively consistent across gender and program divisions, suggesting that the environmental and academic stressors contributing to these symptoms are widespread and not confined to specific subgroups. Notably, female students in the Physical Sciences program show the highest prevalence at about 46.91%, slightly above their peers. However, the overall high rates across all demographics highlight a broader, systemic issue within the university setting that impacts students' mental health significantly.

The uniformity of depressive symptoms across various student groups, despite minor variations, underscores the need for a comprehensive, university-wide approach to mental health. Such an approach should include not only targeted interventions for specific high-risk groups, but also general strategies aimed at reducing stress, enhancing coping mechanisms, and de-stigmatizing mental health issues among the entire student population. This strategy should leverage the established cut-off score to routinely screen and promptly support students at risk, ensuring that interventions are both timely and effective.

The statistical significance of these differences was further validated through independent samples t-tests to determine if there were significant differences in depressive symptoms between students in the Life Sciences and Physical Sciences programs, separated by gender.

**Table 4.** The t-test results for depressive symptoms by gender between students in the Life Sciences and Physical Sciences

Gender	Program	N	Mean	Std. Deviation	t-value	df	p-value	95% Confidence Interval of Difference	Cohen's d
Male	Life Sciences	50	9.820	5.893	0.048	127	0.962	(-1.920, 2.011)	0.009
	Physical Sciences	79	9.772	5.425					

Gender	Program	N	Mean	Std. Deviation	t-value	df	p-value	95% Confidence Interval of Difference	Cohen's d
Female	Life Sciences	109	10.055	5.937	-0.218	188	0.828	(-1.928, 1.544)	-0.032
	Physical Sciences	81	10.247	6.007					

Table 4 displays the statistical outcomes of independent samples t-tests that compare depressive symptom scores between students in the Life Sciences and Physical Sciences programs, stratified by gender. This analysis aimed to identify any significant differences in depressive symptoms across the two academic disciplines, considering the potential variability between male and female students.

For the male students, the t-test yielded a p-value of 0.962, and for the female students, the result was a p-value of 0.828. Both results significantly exceed the commonly used significance threshold of 0.05, suggesting no statistically significant difference in the prevalence of depressive symptoms between students in the two different academic programs. Additionally, the Cohen's d values of 0.009 and -0.032 for males and females, respectively, indicate extremely small effect sizes, suggesting that any observed differences are of negligible practical significance.

These results support the null hypothesis that there is no significant difference in the prevalence of depressive symptoms between students enrolled in Life Sciences compared to those in Physical Sciences, regardless of gender. This suggests that factors other than the program type may be more relevant in influencing or addressing depressive symptoms among these students.

Further analysis was also conducted using a two-way ANOVA to investigate potential interaction effects between gender and academic program on the prevalence of depressive symptoms among foundation students as shown in Table 5.

**Table 5.** Two-Way ANOVA Results Showing Effects of Gender and Program on Depressive Symptoms Among Universiti Malaya Students

Symptom	<i>F</i> (Gender)	<i>p</i> – value (Gender)	<i>F</i> (Program)	<i>p</i> – value (Program)	<i>F</i> (Interaction)	<i>p</i> – value (Interaction)	Partial Eta Squared (Interaction)
Felt miserable or unhappy	0.031	.861	0.035	.853	1.056	.305	.003
Didn't enjoy anything at all	0.958	.328	0.046	.830	0.202	.653	.001
Felt so tired I just sat around	0.192	.661	0.945	.332	0.000	.986	.000
Was very restless	0.106	.745	0.445	.505	0.019	.889	.000
Felt I was no good anymore	0.770	.381	2.717	.100	0.291	.590	.001
Cried a lot	13.896	.000	0.429	.513	0.110	.740	.000
Found it hard to concentrate	0.160	.689	0.001	.974	0.052	.820	.000
Hated myself	0.472	.492	0.001	.974	0.020	.888	.000
Was a bad person	2.192	.140	0.242	.623	0.274	.601	.001
Felt lonely	0.711	.400	0.126	.723	0.579	.447	.002

Thought nobody really loved me	0.470	.493	0.244	.622	0.359	.549	.001
Could never be as good as others	0.234	.629	1.220	.270	1.151	.284	.004
Did everything wrong	0.625	.430	0.415	.520	0.171	.680	.001

The findings indicate that neither gender nor program type alone significantly predicts the majority of depressive symptoms. This suggests that underlying depressive tendencies among students may not be readily influenced by these factors in isolation. However, a notable exception is observed in the symptom "Cried a lot," where a significant main effect of gender ( $F = 13.896$ ,  $p < .001$ ) was recorded. This finding aligns with existing literature that often reports higher emotional expressiveness and reporting of depressive symptoms among females compared to males [11,12].

Despite these gender-specific differences in emotional expression, the interaction effects between gender and program type were generally non-significant across the symptoms studied, where p-values ranged from 0.305 for feelings of misery to 0.986 for feelings of tiredness and inactivity, all well above the conventional significance level ( $\alpha = 0.05$ ). This suggests that the interaction between a student's gender and their chosen academic program, Life Sciences versus Physical Sciences, does not significantly influence various depressive symptoms including feelings of misery, lack of enjoyment, inactivity, restlessness, and other related emotional states. The academic program's nature does not modify how gender influences the expression of depressive symptoms, suggesting a uniform impact across different academic contexts within the university.

These findings are pivotal as they suggest that depressive symptoms manifest similarly across different gender and academic program combinations within the student population. The lack of significant interaction effects implies that while individual factors associated with gender and academic program may independently influence depressive symptoms, their combined impact does not differentiate significantly across the groups studied. This observation aligns with prior research indicating that the broader educational environment may play a more crucial role in influencing student mental health than the specific intersections of demographic and academic variables [13,14].

## CONCLUSION

While our Two-Way ANOVA and hypothesis testing revealed no statistically significant differences in depressive symptoms across gender or academic programs at Universiti Malaya, the descriptive statistics presented in Table 2 and Table 3 provide an equally crucial perspective. These tables show that a considerable proportion of students are experiencing symptoms of depression, with notable percentages among both male and female students across different academic disciplines. For instance, male students in the Physical Sciences reported a depression incidence of 43.04%, slightly lower than their Life Sciences counterparts at 44%. Similarly, female students in the Physical Sciences exhibited a slightly higher incidence of depressive symptoms at 46.91%, compared to those in the Life Sciences at 43.12%. Although these differences are not statistically significant, they are practically relevant and warrant careful consideration.

These findings underscore the importance of recognizing the prevalence of depressive symptoms among students, which may not always manifest as significant differences in controlled statistical tests but still represent a substantial aspect of student welfare and mental health. In response, there is a pressing need to enhance mental health services on university campuses. This enhancement involves broadening access to counselling services, cultivating peer support networks, and embedding mental health education within the academic curriculum to destigmatize mental health issues and facilitate early intervention.

To shift from a reactive to a proactive approach in managing student mental health, it is essential for university policymakers and educators to consider both the statistical outcomes and the practical implications of these findings. Implementing early screening for symptoms of depression and other mental health conditions during orientation sessions or at the commencement of foundation programs could offer a strategic point to identify at-risk students. Early identification allows for timely support, potentially averting the escalation of mental health issues.



Adopting a holistic, student-centered approach to mental health is crucial. This approach should integrate various facets of student life, from academic support to engagement in social activities, to create a nurturing environment that promotes mental well-being. Such a comprehensive strategy ensures that students receive support that is attuned not only to their educational needs but also to their emotional and social well-being.

The effectiveness of these interventions should be continuously researched and evaluated. Regular assessments of student mental health and an iterative process that refines and optimizes policies based on empirical evidence and student feedback are essential. This ongoing evaluation will help institutions like Universiti Malaya adapt and evolve their mental health strategies to meet the changing needs of their student population effectively.

Future research should continue to explore other potential moderators or mediators that might influence the relationship between academic discipline, gender, and mental health. Incorporating qualitative methods could provide deeper insights into the personal and contextual factors that contribute to the mental health of students across different disciplines and demographics, potentially uncovering nuanced dynamics not captured by quantitative measures alone. These recommendations can be employed to better support students and enhance their educational experience, leading to significant improvements in student mental health outcomes and overall well-being.

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#### **Data Availability:**

Data will be provided upon request.

#### **Conflict of Interest:**

The authors agree that there is no conflict of interest to declare.

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