

Factors Influencing Stress Among Undergraduate Students in Sri Lanka (With Special Reference to Sabaragamuwa University of Sri Lanka)

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Abstract

Any person in any career may experience stress, which is a common negative emotional feeling that affects people of all ages worldwide. It is commonly known that university undergraduate students worldwide have a high prevalence of stress. Students from various socioeconomic backgrounds who enter universities may have mental health issues. There is a shortage of studies on this topic in the Sri Lankan setting, and it is of great importance to identify the factors affecting stress among undergraduate students. Therefore, the main objective of this study was to identify the factors affecting stress among undergraduate students. A sample of 384 undergraduate students from the Sabaragamuwa University of Sri Lanka was selected using the two-stage cluster sampling technique. The primary data was collected through a structured questionnaire. The questionnaire included the DASS-21 scale (Depression, Anxiety, and Stress Scale), which measured the undergraduates' level of stress. Binary logistic regression was performed with 23 independent variables to accomplish the main goal. The pressure of the thesis and internship and financial difficulties were found to have a positive effect on undergraduates' stress. The pressure of the thesis and internship and a lack of sleep were found to be significant determinants for female students. Male students' stress was found to be influenced by the pressure of thesis and internship, lack of sleep, and subject difficulties. For students, university administrators, lecturers, and policymakers, the whole study provides significant recommendations on how to reduce stress.

Keywords: Binary Logistic Regression; Undergraduate Students; Stress

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1. Introduction

Stress is an inevitable part of life, affecting individuals physically, emotionally, and psychologically. The World Health Organization (WHO) has recognized stress as the “Health epidemic of the 21st century.” University students, both globally and in Sri Lanka, often experience heightened stress due to academic pressures, social expectations, and personal factors, impacting their mental and physical health.

The transition from school to university can be especially stressful, with first-year students facing the added challenge of adapting to new educational environments, cultures, and academic approaches. Studies show that the academic workload, fear of failure, and competition for grades are common stressors. Social factors, such as adjusting to new surroundings and managing relationships with peers, also contribute to stress.

In Sri Lanka, university students face significant stress levels due to heavy coursework, exams, and a demanding curriculum. Research indicates that a large percentage of students report psychological distress, with some even experiencing suicidal thoughts due to overwhelming academic pressures. Studies conducted among Sri Lankan undergraduates show that a large proportion of students experience moderate to severe stress, with some specific academic events, such as exams and assignments, identified as major sources of anxiety.

The psychological toll of stress among students is severe, leading to issues like depression, anxiety, and burnout. These mental health issues are linked to long-term physical health problems, including high blood pressure and gastrointestinal disorders. Moreover, extreme stress levels can significantly harm academic performance, as students may become overwhelmed, lose focus, and struggle to meet expectations.

Globally, the rise in mental health issues among university students, including stress and depression, is alarming. In the U.S., a high percentage of students report feeling anxious about exams, future job prospects, and the pressure to perform academically. In Sri Lanka, stress has even been linked to tragic incidents, such as suicides among students due to academic pressure, further highlighting the urgent need for support systems.

Sri Lanka has 15 public universities, with admissions based on competitive Z-scores. The intense academic demands in these institutions contribute to stress, with undergraduates often finding it difficult to manage the heavy workload, exams, and assignments. Research suggests that students in Sri Lanka, especially those in medical fields, are particularly vulnerable to stress-related issues. Furthermore, the increase in stress-related mental health problems has coincided with a rise in suicides among university students, underscoring the dire need for intervention.

Recent studies in Sri Lanka have found alarming statistics regarding student stress. A study of nursing students revealed that over 82% reported stress, with a significant percentage of students experiencing moderate to severe levels of psychological distress. Other research found that most undergraduates in Sri Lanka suffer from high levels of stress, particularly during exam periods.

Several factors contribute to stress among university students, both academic and social. Academically, the pressure of exams, large curricula, and a high volume of assignments are key stressors. Socially, adjusting to university life, building new relationships, and experiencing homesickness also add to the pressure. Additionally, the competitive nature of university life, particularly in Sri Lanka, can exacerbate stress.

Medical students in Sri Lanka are particularly affected by stress, with some experiencing depression at higher rates than their peers in other disciplines. Moreover, social factors, such as ragging (bullying), have also been identified as stressors in Sri Lankan universities.

Stress has a direct impact on academic performance. Undergraduates who experience high levels of stress often report poor academic outcomes, as stress can hinder concentration, memory retention, and overall productivity. A study by the American College Health Association found that stress is the leading cause of poor academic performance, with 41.3% of students attributing their low grades to stress.

Burnout, a phenomenon linked to chronic stress, is also a significant concern. Many students, particularly in high-pressure academic fields, experience burnout, leading them to disengage from their studies and, in some cases, abandon their educational pursuits altogether.

While studies on stress and mental health among university students exist, there is a gap in research focusing on stress levels among students in Sri Lanka, particularly in non-medical fields. This study aims to address this gap by focusing on undergraduates from the Social Sciences and Management faculties at Sabaragamuwa University of Sri Lanka.

The study will help identify the sources of stress among university students, providing insights into how these stressors impact their mental health and academic performance. It will also contribute to developing strategies to support students' mental well-being, ultimately reducing stress and preventing its harmful effects, including suicide.

Stress among university students is a significant issue, with serious implications for mental and physical health, as well as academic success. In Sri Lanka, where university admissions are highly competitive, students face unique challenges that contribute to stress. Understanding these stressors and their effects is crucial in developing support systems and intervention strategies. This research will help pave the way for policies that promote mental health and well-being among university students, potentially preventing tragic outcomes like suicides.

2. Literature Review

Stress is the body's natural response to change, triggering physical, emotional, and cognitive reactions. While stress can be helpful in adapting to challenges, it becomes problematic when persistent without relief. There are two types of stress: acute stress, which is temporary and helps manage risks, and chronic stress, which lasts longer and is linked to ongoing issues like financial or personal difficulties. Stress can be either positive, called "eustress" (e.g., excitement from a promotion), or negative, known as "distress," when stress becomes overwhelming without relief.

When stressed, the brain signals the adrenal glands to release cortisol and adrenaline, hormones that, when sustained over time, can negatively affect health. Chronic stress can lead to cognitive issues such as memory problems and anxiety, as well as physical symptoms like headaches, fatigue, chest pain, digestive issues, and skin conditions. The physiological response to stress is explained through Selye's General Adaptation Syndrome (GAS), which consists of three stages: alarm, resistance, and exhaustion. Additionally, Lazarus and Folkman's Cognitive Appraisal Theory highlights how personal perceptions influence stress responses and coping mechanisms.

University students report high levels of stress, primarily due to academic and financial pressures. Many students experience mental health challenges such as anxiety and depression, and in extreme cases, stress can lead to self-harm or suicidal thoughts. The academic workload and financial difficulties are the main stressors, and the transition to university is particularly stressful, with stress continuing throughout the academic journey, affecting mental and physical health.

In Sri Lanka, university students face specific stressors like exam pressure, heavy workloads, and academic expectations. The education system's emphasis on rote learning and extensive syllabi also adds to stress levels. Tools like the Depression Anxiety Stress Scale – 21 (DASS-21) are used to assess the severity of depression, anxiety, and stress.

Empirical research identifies multiple factors contributing to stress among university students. In Sri Lanka, significant stressors include academic workload, peer competition, financial challenges, and family issues (Weerasinghe T.D., 2018; Wanigasinghe A.O., 2019). Similar stressors are found worldwide, with women reporting higher stress levels (Acosta M.G., 2018). Environmental factors like homesickness and poor living conditions also contribute to stress, particularly for students living in hostels (Fisher, 1994). Studies use surveys and questionnaires, such as SPSS analysis, to identify the complex factors that shape stress in students.

In conclusion, stress among university students, particularly in Sri Lanka, is caused by academic and financial pressures and can lead to serious mental and physical health issues. Addressing these stressors is crucial to improving student well-being and academic success.

3. Research Gap

The researcher highlights a gap in studies on stress among Sri Lankan undergraduates, particularly outside humanities and management faculties. While international research exists, Sri Lanka has limited studies on stress, especially in faculties like Social Sciences, Languages, and Applied Sciences. Existing studies show that the COVID-19 pandemic increased stress, anxiety, and psychological distress among nursing and medical students. However, research focusing on the specific stressors affecting undergraduates in other fields, including at Sabaragamuwa University, is scarce. This study aims to fill this gap by exploring the factors contributing to stress among Sri Lankan undergraduate students across various faculties.

4. Methodology

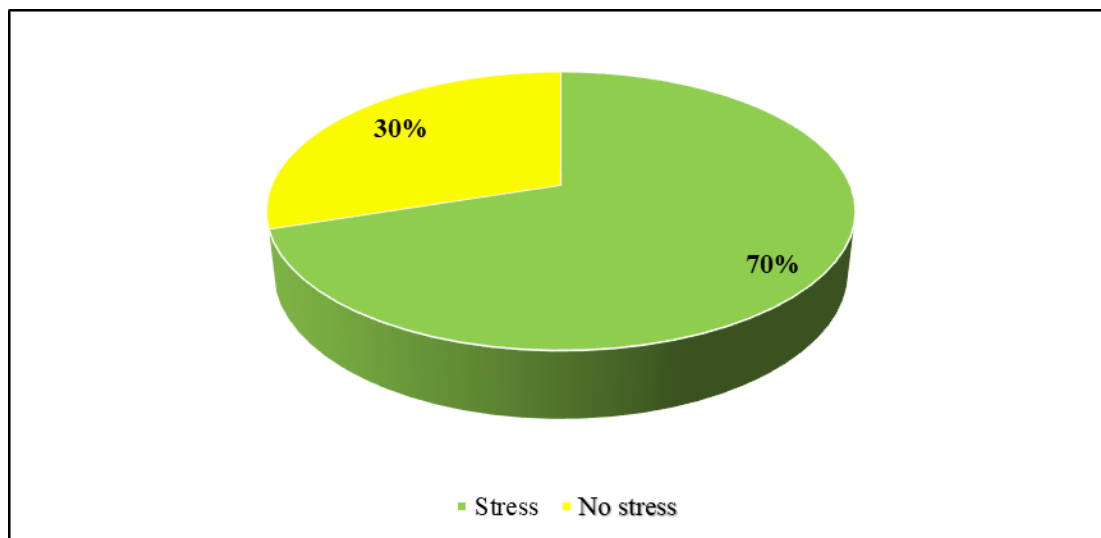
This study examines stress among undergraduate students at Sabaragamuwa University of Sri Lanka, focusing on two randomly selected faculties: Social Sciences & Languages and Management Studies. A total sample of 384 students was selected using proportional allocation across four academic years from each faculty. Of these, 196 students were chosen from the Social Sciences & Languages faculty, and 188 from the Management Studies faculty. Data was collected through surveys and secondary sources such as government statistics and research articles. The stress levels of students were assessed using four Likert-type questions, which were converted into binary scores based on a cutoff of 14. The study examines 23 variables influencing student stress, including age, gender, academic year, marital status, and faculty. Academic stressors like workload, subject difficulties, exam results, and GPA are explored. Emotional factors such as relationship problems, homesickness, and uncertain job future also contribute. Financial challenges, including financial difficulties and food problems, are considered, along with academic pressures from online learning difficulties, exams and assignments, and industrial training. Social factors like social media addiction, lecturer's performance, insufficient relax time, residential problems, and language difficulties are analyzed. The study identifies key factors impacting student stress.

The data were analyzed using SPSS, applying Binary Logistic Regression, correlation analysis, chi-squared tests, and one-way ANOVA to identify factors influencing stress among students. This methodology helps determine the various factors contributing to stress in the undergraduate population at the university.

5. Conclusions Drawn from Data Presentation

The study reveals that 70% of undergraduates experience stress, with female students (74.25%) more stressed than males (24.46%). Second-year students are the most stressed (80%), while first-year students report the least stress (56%), possibly due to online learning and fewer stressors. Stress levels are similar for third- and fourth-year students. Students in the Faculty of Social Sciences and Languages (71.43%) experience slightly more stress than those in Management Studies. Rural students (73.30%) report higher stress levels than urban students (35.85%). Most students manage stress through hobbies (33%), sleep (30%), or talking to friends (24%), but few seek counseling services. Nearly 90% of suicidal students suffer from stress.

Figure 1. 1: Undergraduate's stress



Source: Sample Survey 2022

Table 1. 1: Stress Vs Gender

Stress	Sex	
	Male	Female
No stress	38.14%	61.86%
Stress	24.46%	74.25%

Source: Sample Survey 2022

6. Conclusions Drawn from Data Analysis

Key Findings for Total Students:

1. Pressure of Thesis and Internship: Undergraduates with constant or frequent pressure from their thesis and internship experiences reported significantly higher stress levels. The stress increased by 78.26% for those under constant pressure and 73.09% for those under frequent pressure. This stress is attributed to the demands of final year research projects and internships, which involve tight deadlines, financial burdens, and time management challenges.

2. **Financial Difficulties:** Financial strain was identified as a major stressor, with students facing financial difficulties reporting a 58.69% increase in stress levels compared to those without such difficulties. The ongoing economic crisis in Sri Lanka exacerbates these issues, with students from low-income families struggling to cover essential costs like travel, food, and stationery.

Table 1.2: Best fitted model

Parameter	B	S.E.	Wald	df	Sig.	Exp(B)
Pressure Of Thesis Intern - Ever	-1.107	0.537	4.256	1	0.039	0.330
Lack Of Sleep - Often	1.808	0.496	13.290	1	0.000	6.096
Subject Difficulties - Sometimes	1.186	0.390	9.229	1	0.002	3.273
Constant	-0.350	0.462	0.574	1	0.449	0.705

Source: Sample Survey 2022

Gender-Specific Findings:

- **Female Students:**
 - **Pressure of Thesis and Internship:** Female students facing constant or frequent thesis and internship pressures had their stress levels increased by 71.73%.
 - **Inadequate Sleep:** Lack of sleep was found to be a critical stress factor for female students. Stress levels increased by 85.54% for those who often did not get enough sleep and 65.57% for those who sometimes experienced inadequate sleep. Sleep deprivation is common among university students, leading to increased cortisol levels, a stress hormone.

Table 1.3: Best fitted model

Parameter	B	S.E.	Wald	df	Sig.	Exp(B)
Pressure of Thesis and Intern-Always	1.057	1.057	3.954	1	0.047	2.878

Lack Of Sleep – Often	1.904	0.499	14.543	1	0.000	6.711
Lack Of Sleep – Sometimes	0.779	0.365	4.543	1	0.033	2.178
Lack Of Sleep – Ever	0.848	0.420	4.073	1	0.044	2.335
Constant	-0.126	0.440	0.082	1	0.774	0.881

Source: Sample Survey 2022

- **Male Students:**
 - **Pressure of Thesis and Internship:** Unlike female students, male students under pressure from thesis and internship experienced a slight decrease in stress levels by 18.89%, possibly due to different coping mechanisms or expectations.
 - **Inadequate Sleep:** Sleep deprivation also affected male students, with stress increasing by 81.12% for those who frequently did not get enough sleep.
 - **Subject Difficulties:** Male students facing difficulties in their coursework experienced a 69.76% increase in stress. These difficulties arise from challenging subject matter and an overload of information that exceeds their understanding and interest, which negatively impacts their academic performance.

Table 1.4: Best fitted model

Parameter	B	S.E.	Wald	df	Sig.	Exp(B)
Pressure Of Thesis Intern - Ever	-1.107	0.537	4.256	1	0.039	0.330
Lack Of Sleep - Often	1.808	0.496	13.290	1	0.000	6.096
Subject Difficulties - Sometimes	1.186	0.390	9.229	1	0.002	3.273
Constant	-0.350	0.462	0.574	1	0.449	0.705

Source: Sample Survey 2022

The study reveals that factors like thesis pressure, internship stress, financial difficulties, and sleep deprivation are significant contributors to stress among undergraduates in Sri Lanka. These findings underscore the importance of addressing these stressors in academic settings to support students' mental health and academic success. Specifically, institutions should consider providing better financial support, time management resources, and counseling services to mitigate the impact of these stressors on students.

7. Recommendations

To minimize stress among university undergraduates, several recommendations based on study findings are

proposed. While stress is necessary for achieving academic goals, excessive stress can be harmful, highlighting the need for effective stress management.

Financial difficulties, affecting 68% of students, significantly contribute to stress. Authorities should offer financial assistance, such as concessionary season tickets and free, quality meals, along with subsidized laptops and free internet access.

Students should begin projects early, seek advice when selecting research topics, and maintain regular communication with supervisors. Managing a project budget and working under supervision are also important. Lecturers should avoid overly technical subjects and offer clear guidelines, fostering a supportive environment where students feel comfortable asking questions.

Exams and assignments should be spaced with adequate breaks, and lectures should not exceed four hours daily. Introducing technology skills early in the curriculum will help students prepare for the job market and reduce anxiety about the future.

Training programs on stress management, study techniques, and psychological support should be available. Improving counselling services and expanding resources for academic and extracurricular support will further help students manage stress effectively.

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Appendix

Null model for total students

Parameter	B	S.E.	Wald	df	Sig.	Exp(B)
Constant	0.863	0.121	50.856	1	.000	2.371

Total students

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Thesis Intern			24.233	4	.000	
Thesis Intern (1)	1.475	.521	8.025	1	.005	4.371
Thesis Intern (2)	1.193	.506	5.556	1	.018	3.298
Thesis Intern (3)	.766	.470	2.663	1	.103	2.152
Thesis Intern (4)	-.248	.492	.254	1	.614	.780
Financial Difficulties (1)	.545	.260	4.375	1	.036	1.724
Constant	-.194	.448	.188	1	.664	.824

Omnibus Tests of Model Coefficients

	Chi-square	df	Sig.
Step	30.293	5	.000
Block	30.293	5	.000
Model	30.293	5	.000

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	5.980	7	.542

FEMALE

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Thesis Intern			23.601	4	.000	
Thesis Intern (1)	1.057	.532	3.954	1	.047	2.878
Thesis Intern (2)	.576	.525	1.204	1	.273	1.778
Thesis Intern (3)	.233	.488	.228	1	.633	1.262
Thesis Intern (4)	-.874	.519	2.839	1	.092	.417

Lack Of Sleep			14.943	4	.005	
Lack Of Sleep (1)	.502	.478	1.102	1	.294	1.652
Lack Of Sleep (2)	1.904	.499	14.543	1	.000	6.711
Lack Of Sleep (3)	.779	.365	4.543	1	.033	2.178
Lack Of Sleep (4)	.848	.420	4.073	1	.044	2.335
Constant	-.126	.440	.082	1	.774	.881

Omnibus Tests of Model Coefficients

	Chi-square	df	Sig.
Step	45.395	8	.000
Block	45.395	8	.000
Model	45.395	8	.000

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	5.211	8	.735

MALE

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Thesis Intern			24.159	4	.000	
Thesis Intern (1)	.904	.554	2.661	1	.103	2.469
Thesis Intern (2)	.332	.535	.385	1	.535	1.393
Thesis Intern (3)	-.142	.505	.079	1	.779	.868
Thesis Intern (4)	-1.107	.537	4.256	1	.039	.330
Lack Of Sleep			13.767	4	.008	
Lack Of Sleep (1)	.435	.483	.811	1	.368	1.545
Lack Of Sleep (2)	1.808	.496	13.290	1	.000	6.096
Lack Of Sleep (3)	.602	.367	2.692	1	.101	1.825
Lack Of Sleep (4)	.795	.427	3.473	1	.062	2.215
Subject Difficulties			11.097	4	.025	
Subject Difficulties (1)	.446	.436	1.050	1	.306	1.563
Subject Difficulties (2)	.222	.410	.293	1	.588	1.249
Subject Difficulties (3)	1.186	.390	9.229	1	.002	3.273
Subject Difficulties (4)	.744	.397	3.505	1	.061	2.104
Constant	-.350	.462	.574	1	.449	.705

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	58.387	12	.000
	Block	58.387	12	.000
	Model	58.387	12	.000

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	4.864	8	.772