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The Impact of Socioeconomic Status on Academic Stress among Secondary School Students in Sri Lanka: A Quantitative Study

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Abstract

This study examines the relationship between socioeconomic status (SES) and academic stress among secondary school students in the Northern Province of Sri Lanka in the context of the economic crisis. Using a cross-sectional, quantitative research design, data were collected from 155 students across government, private, and international schools. Correlational analysis (RQ1) revealed significant negative relationships between academic stress and socioeconomic status ($r = -0.705$, $p < 0.001$), household income ($r = -0.526$, $p < 0.001$), and parental occupation ($r = -0.160$, $p = 0.048$), indicating that students from higher socioeconomic backgrounds tend to experience lower academic stress. Multiple regression analysis (RQ2) showed that socioeconomic status was a strong and significant predictor of academic stress ($\beta = -0.700$, $p < 0.001$), while household income and parental occupation were not significant when SES was included in the model. ANOVA results (RQ3) demonstrated significant differences in academic stress across household income groups, $F(3, 150) = 32.922$, $p < 0.001$, suggesting that students from lower-income households experience higher levels of academic stress. These findings highlight the critical role of socioeconomic conditions in shaping students' academic well-being and recommend targeted policy interventions to support students from disadvantaged backgrounds and call for further longitudinal studies to better understand long-term impacts.

Keywords: SES, Academic Stress, Secondary Students, Sri Lanka, well Being

Inroduction

Academic stress is a major concern affecting secondary school students globally, with heightened relevance in Sri Lanka following the economic collapse of 2022. Financial instability exacerbated disparities, placing lower SES students at greater risk. Existing research in Sri Lanka predominantly addresses general academic performance, lacking focus on SES-linked academic stress during economic crises. The crisis resulted in soaring inflation, a sharp depreciation of the Sri Lankan rupee, and widespread poverty, with nearly one-third of the population living below the poverty line by 2023 (Mehta, 2022; Perera, 2022). This study addresses this gap by investigating the relationships between SES indicators (household income and parental occupation) and academic stress.

The constant pressure to achieve high grades, driven by societal and personal expectations, can lead to significant stress (Lim & Bakar, 2021). Students who perceive academic competition as a threat may experience performance anxiety, which can impair cognitive functioning and reduce academic achievement. These factors can elevate academic stress levels, potentially hindering academic success and well-being. Parental occupations, in particular, have been shown to influence students' academic performance and stress levels (Shah, Hussain, & Khoso, 2021). Therefore, it is crucial to investigate the specific impact of socioeconomic status on academic stress among Sri Lankan secondary school students to inform future educational interventions and policies that support at-risk student populations

Problem Statement

The economic downturn intensified existing inequalities, disrupting educational experiences and elevating academic stress, particularly among low-income students. This crisis marked by soaring inflation, fuel and food shortages, and the collapse of essential public services has not only disrupted daily life but also intensified the emotional and financial strain on students and their families (Tripathi, Sharma, & Pandya, 2022). Despite international acknowledgment of SES effects on education, empirical evidence specific to Sri Lanka remains limited, necessitating localized investigation.

The stress caused by high expectations and academic competition is further intensified by the fear of failure. According to Lazarus, this stress arises when students' appraisal of the situation leads them to believe they lack the necessary skills or resources to meet these high expectations. A global study by Vadivel et al. (2023) revealed that students from low-income families are more likely to drop out of school early and enter the labor market in low-skilled jobs, often because their families lack the resources or motivation to support further education. These patterns, deeply rooted in systemic SES inequalities, not only compromise academic outcomes but also have lasting impacts on students' physical and mental well-being (APA, n.d.; Chetty et al., 2011). As a result, students may engage in maladaptive coping strategies, such as excessive studying or avoidance of challenging tasks, which can negatively impact both their mental health and academic performance (Rahman et al., 2019).

Research Objectives

In this study, the researcher intends to achieve the following objectives:

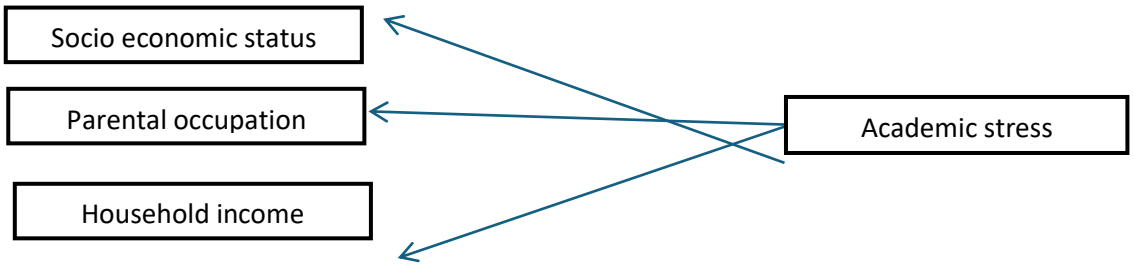
1. To examine the relationships between academic stress and various socioeconomic status (SES) indicators, including socioeconomic status, parental occupation, and household income.
2. To examine the predictive relationship between socioeconomic status (SES), parental occupation, and household income, and academic stress among students.
3. To examine the differences in academic stress based on parental household income among students.

Research Questions

The research questions are as follows:

1. What is the relationship between academic stress and various socioeconomic status (SES) indicators, including socioeconomic status, parental occupation, and household income?
2. What is the predictive relationship between socioeconomic status (SES), parental occupation, and household income, and academic stress among students?
3. How does parental household income influence academic stress among students?

Research Framework



Theoretical Framework

The study is anchored in Bronfenbrenner's Ecological Systems Theory, emphasizing the interplay between microsystems, mesosystems, exosystems, macrosystems, and chronosystems in shaping student outcomes. (Guy-Evans, O. 2024). Applying this theory to the context of academic stress, the **microsystem** would encompass the student's immediate interactions, such as family support or school environment, while the **ecosystem** might include factors like parental occupation and income that indirectly influence the student's stress levels. The **macrosystem**, which includes the broader economic environment, is particularly relevant in the case of Sri Lanka, given the recent economic crisis, which has had a far-reaching impact on students' academic experiences and well-being.

Literature Review

Extant literature confirms that low SES is associated with increased academic stress globally. In Sri Lanka, the economic crisis further marginalized students from low-income backgrounds. However, a notable gap remains regarding the specific impacts of SES on stress during economic turmoil. Recent studies indicate that academic stress can lead to mental health issues, including anxiety and depression, affecting students' overall well-being and academic performance (Hosseinkhani et al., 2020; Praveeni & Herath, 2020). In Sri Lanka, the competitive nature of examinations and the high value placed on academic success contribute to elevated stress levels among students (Athukorale et al., 2020).

Household income significantly affects students' educational experiences. Financial constraints can limit access to essential learning resources, such as textbooks, internet connectivity, and private tutoring. During the COVID-19 pandemic, students from low-income families faced heightened academic stress due to the inability to afford online learning tools and a conducive study environment (APA, 2020; Axios, 2020). In Sri Lanka, economic disparities have been linked to differences in educational attainment and stress levels among students (Arulmoly, 2020; Athukorale et al., 2020).

Research Design

A quantitative, cross-sectional design was employed. Stratified random sampling secured representation across school types. Data collection utilized a self-administered online questionnaire assessing SES and academic stress. SPSS was used for descriptive analysis, correlation analysis (Spearman's rho), multiple regression, and ANOVA. The study followed ethical protocols, including informed consent and data confidentiality.

Samples and Sampling

The target population for this study comprised secondary school students (Grades 6–11) enrolled in various government, private, and international schools in Sri Lanka. A total of 155 students participated, reflecting a diverse cross-section of the student demographic.

To ensure adequate representation across different socioeconomic groups and school types, the study adopted a stratified random sampling technique. Participants were stratified based on school type and geographic location, and students were randomly selected within these strata. This method enhanced the representativeness of the sample, thereby improving the generalizability of the findings despite geographic limitations.

Instrumentation

There are 28 items with 3 parts for instrumentation. All items went through reliability and validity process. Part A for Demographic factors which consists of 8 items. For Socioeconomic Status Indicators consists of 10 items, the questions assessed various aspects of the participants' socioeconomic background. Items included parental income, parental education levels, and occupational categories. These indicators were chosen to provide a comprehensive understanding of the participants' socioeconomic context, which can significantly influence their academic experiences and stress levels. For Academic Stress Assessment also consists of 10 items to measure students perceived academic stress across dimensions such as exam pressure, workload, and parental expectations. The questionnaire was designed to be concise and accessible, minimizing respondent fatigue and encouraging high response rates. A pilot test involving a small group of students (n = 10) was conducted to assess the clarity, internal consistency, and reliability of the items. Based on the feedback, minor revisions were made to improve wording and structure.

Procedures

The study followed strict ethical procedures to ensure the safety, privacy, and rights of all participants. Firstly, theoretical Clearance where the approval was obtained from the relevant institutional review boards and educational authorities. Another part is about the Informed Consent where the detailed information sheets were provided, and informed consent was obtained from students and their guardians. The researcher had collected the data by using the online questionnaire link which was shared through school email systems and student platforms. The survey was open for four weeks, with periodic reminders sent to enhance participation. All responses were stored securely via Google Sheets and then exported to SPSS for statistical analysis. Before commencing the main data collection, a pilot study was conducted to assess the clarity, reliability, and usability of the research instrument. The pilot test was carried out with a small sample of 10 secondary school students who were not part of the final sample but shared similar demographic characteristics.

Analysis

Descriptive Statistics was used to summarize demographic characteristics, SES variables, and academic stress scores. To see the normality of test, the researcher conducted the Normality Tests by using Shapiro-Wilk and Kolmogorov-Smirnov tests to assess the distribution of continuous variables. To find the correlation, the Bivariate Analysis was used with Spearman's rho correlation coefficients were calculated to explore relationships between SES indicators and academic stress levels. Besides, Multiple Regression Analysis also was used to identify the extent to which SES variables predict academic stress, while controlling for potential confounding variables. Finally, ANOVA (Analysis of Variance) Conducted to examine differences in academic stress levels across distinct SES categories (e.g., income brackets or educational attainment levels).

Normality Assessment of Academic Stress Scores

To determine whether the academic stress scores followed a normal distribution, two statistical tests were conducted: the Shapiro-Wilk test and the Kolmogorov-Smirnov test. Both tests are commonly used to assess the assumption of normality, which is a key requirement for many parametric statistical analyses. The results of the Shapiro-Wilk test yielded a statistic of 0.904 with a p-value less than 0.001, while the Kolmogorov-Smirnov test produced a statistic of 0.143, also with a p-value of less than 0.001. In both cases, the p-values are below the conventional threshold of 0.05, indicating that the null hypothesis of normality should be rejected. This means that the distribution of academic stress scores significantly deviates from a normal distribution.

RQ1: What is the relationship between academic stress and various socioeconomic status (SES) indicators, including socioeconomic status, parental occupation, and household income?

H1: There is a significant negative relationship between socioeconomic status, parental occupation, household income and academic stress among students.

Table 1
Spearman's Correlation Results

Variable	Correlation with Academic Stress	Strength	Significance	Interpretation
Socioeconomic Status (MEANSES)	-0.705	Strong	$p < 0.001$	As SES increases, academic stress significantly decreases.
Parental Occupation	-0.160	Weak	$p = 0.048$	Students with parents in higher-status occupations tend to have slightly lower academic stress.
Household Income	-0.526	Moderate	$p < 0.001$	Higher household income is moderately associated with lower academic stress.

The results suggest that students from more advantaged socioeconomic backgrounds tend to experience significantly less academic stress. This supports the idea that financial stability and parental job security may buffer students from stressors related to academic performance, access to resources, or future uncertainty. Overall, the bivariate correlations suggest that higher socioeconomic status, including higher household income and certain parental occupations, is associated with lower levels of academic stress among students. These

findings underscore the importance of socioeconomic factors in shaping students' academic experiences and highlight the need for targeted interventions to support students from lower SES backgrounds in managing academic stress. Therefore, the research question is answered and the hypothesis that there is a significant negative relationship between socioeconomic status, parental occupation, household income and academic stress among students is supported.

RQ2: What is the predictive relationship between socioeconomic status (SES), parental occupation, and household income, and academic stress among students?
(H0): Socioeconomic status, parental occupation, and household income do not significantly predict academic stress among students
A multiple regression analysis was conducted to predict academic stress using socioeconomic status (SES), parental occupation, and household income as predictors. The results are summarized as follows:

Model Summary

- **R-squared**: 0.485
- **ANOVA**: $F(3, 150) = 47.070$, $p < 0.001$

Predictor	B	β	p-value
Constant	52.835	–	< 0.001
SES (MEANSES)	-0.666	-0.700	< 0.001
Household Income	0.209	0.020	0.810
Parental Occupation	-0.730	-0.095	0.109

The multiple regression analysis revealed that socioeconomic factors significantly influence academic stress, with the model explaining 48.5% of the variance in stress levels among students. Socioeconomic status (SES) was found to be a strong and statistically significant negative predictor, indicating that students from higher SES backgrounds tend to experience lower academic stress. In contrast, household income and parental occupation did not significantly predict academic stress when SES was accounted for, suggesting that SES as a composite measure captures broader influences on student well-being than income or occupation alone. These findings highlight the critical role of overall socioeconomic conditions in shaping students' academic experiences and stress levels. Therefore, the hypothesis was rejected.

RQ3: How does parental household income influence academic stress among students?
(H0): There are no significant differences in academic stress levels among students based on parental household income.

Table 2
Household income

Source	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9600.000	3	3200.000	32.922	0.000
Within Groups	14651.000	150	97.674		
Total	24251.000	155			

In contrast, the ANOVA results for household income showed a significant effect on academic stress. The F-ratio was F (3,150) =32.922F (3,150)=32.922 with a p-value of p<0.001p<0.001. This indicates that there are significant differences in academic stress levels based on household income. Specifically, students from different incomes experience varying levels of academic stress, with those from lower-income households likely experiencing higher stress levels. This significant finding underscores the impact of financial stability on students' academic experiences. Higher household income may provide students with better access to resources, support systems, and a more conducive environment for academic success, thereby reducing stress. Therefore, the research question 3 has been answered and the hypothesis was rejected.

Discussion of Study

According the the forst research objective, the bivariate correlations suggest that higher socioeconomic status, including higher household income and certain parental occupations, is associated with lower levels of academic stress among students. These findings underscore the importance of socioeconomic factors in shaping students' academic experiences and highlight the need for targeted interventions to support students from lower SES backgrounds in managing academic stress. Overall, the study provides valuable insights into the complex dynamics between socioeconomic status and academic stress, emphasizing the need for comprehensive support systems to enhance student well-being and academic performance. Future research should continue to explore these relationships and develop strategies to mitigate academic stress effectively.

Based on the second research objective, the regression model indicates that socioeconomic status (SES) significantly predicts academic stress among students, with higher SES associated with lower levels of academic stress. This finding suggests that students from higher socioeconomic backgrounds may have better access to resources and support systems that help mitigate academic stress. In contrast, household income and parental occupation did not significantly predict academic stress in this model. This may imply that while overall socioeconomic status plays a crucial role, specific aspects such as income and occupation alone are not sufficient to influence academic stress levels significantly.These results underscore the importance of considering broader socioeconomic factors when addressing academic stress and developing interventions to support students. Future research should explore additional variables and contexts to further understand the complex dynamics of academic stress and its predictors.

The results of the third research question show that ANOVA highlights the differential impact of socioeconomic factors on academic stress. While parental occupation does not appear to significantly influence academic stress, household income plays a crucial role. The significant differences in academic stress based on household income suggest that financial stability is a key determinant of students' stress levels. Students from higher-income households may benefit from greater financial security, access to educational resources, and a supportive home environment, all of which can mitigate academic stress.These findings have important implications for educational policy and student support services. Interventions aimed at reducing academic stress should consider the financial backgrounds of students and provide targeted support to those from lower-income households. Additionally, further research is needed to explore other potential factors that may influence academic stress, such as social support, academic workload, and personal coping mechanisms.

In conclusion, the ANOVA results provide valuable insights into the relationship between socioeconomic factors and academic stress. By understanding these relationships, educators and policymakers can develop more effective strategies to support students in managing stress and achieving academic success

Recommendations

Policy Implications

The findings of this study underscore the need for targeted support programs specifically designed for low-SES students. These programs should aim to provide financial assistance, academic tutoring, and mental health resources to help mitigate the stressors associated with lower socioeconomic status. Additionally, enhancing resource allocation for schools serving disadvantaged communities is crucial. This includes increasing funding for educational materials, extracurricular activities, and counseling services to create a more supportive and enriching learning environment for students from low-SES backgrounds.

Practical Initiatives

To address the high levels of academic stress identified in this study, it is essential to introduce comprehensive stress management programs within educational institutions. These programs should include workshops on time management, relaxation techniques, and coping strategies to help students manage their academic workload effectively. Strengthening parental engagement strategies is also vital. Schools should facilitate regular communication between parents and educators, provide resources for parental involvement in academic activities, and offer guidance on how parents can support their children's educational journey.

Future Research

Future research should focus on conducting longitudinal studies to track the impact of socioeconomic factors on academic stress over time. This approach will provide a deeper understanding of how these relationships evolve and the long-term effects on students' academic performance and mental health. Additionally, expanding demographic diversity in research samples is essential. Including broader regional and ethnic representation will ensure that findings are more generalizable and reflective of the diverse student populations.

Limitations

This study has several limitations that should be acknowledged. Cross-sectional design limits the ability to infer causal relationships between socioeconomic factors and academic stress. Future studies should consider longitudinal designs to address this limitation. The reliance on self-reported data introduces potential bias, as participants may underreport or overreport their stress levels and socioeconomic status. Employing mixed-method approaches, including objective measures, can help mitigate this bias. Lastly, the geographic focus on Sri Lanka specific regional schools limits the generalizability of the findings. Expanding the study to include other regions and diverse populations will enhance the applicability of the results.

In conclusion, the study provides valuable insights into the relationship between socioeconomic factors and academic stress, highlighting the need for targeted interventions and further research to support students' well-being and academic success.

Conclusion

This research examined the influence of socioeconomic factors specifically socioeconomic status (SES), parental occupation, and household income on academic stress among students. The findings consistently demonstrate that students from higher socioeconomic backgrounds experience significantly lower levels of academic stress. Correlational analyses revealed strong negative associations between academic stress and SES indicators, particularly overall SES and household income. Regression analysis further confirmed that SES is a significant predictor of academic stress, while parental occupation and household income did not independently predict stress levels when SES was accounted for. Additionally, ANOVA results indicated significant differences in academic stress across household income groups, with students from lower-income households reporting higher stress levels. These results underscore the critical role of socioeconomic conditions in shaping students' academic experiences and psychological well-being. Overall, this research highlights the need for targeted institutional and policy-level interventions to support students from disadvantaged socioeconomic backgrounds, aiming to reduce academic stress and promote equitable educational outcomes.

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