

Psychological Effects and Associated Factors of Examination Stress among School Children

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ABSTRACT

Examination stress represents a critical psychological concern among school-going children, significantly influencing emotional well-being, academic performance, and overall developmental outcomes. The present study aimed to assess the psychological effects of examination stress and identify associated factors among students aged 10–18 years. A cross-sectional descriptive design was employed, involving a sample of 300 students from rural and semi-urban schools in Kolar district, Karnataka. Standardized instruments, including the Examination Stress Scale (ESS) and the Depression Anxiety Stress Scales (DASS-21), were utilized to measure stress and related psychological outcomes. The findings revealed that approximately 62% of students experienced moderate to high levels of examination stress. Significant positive correlations were observed between examination stress and anxiety ($r = .61, p < .001$) as well as depression ($r = .54, p < .001$), indicating a strong association between academic stress and psychological distress. Furthermore, multiple regression analysis identified key predictors of examination stress, including high parental pressure, poor sleep quality, and excessive screen time. These findings underscore the substantial psychological burden associated with academic examinations among adolescents, particularly in competitive educational contexts. The study highlights the urgent need for implementing school-based mental health interventions, promoting adaptive coping strategies, and addressing environmental stressors such as parental expectations and lifestyle factors. Additionally, policy-level reforms aimed at reducing academic pressure and integrating mental health services within educational systems are recommended to support the well-being and holistic development of students.

Introduction

Examinations are a central component of formal education systems and serve as standardized tools for assessing students' knowledge, skills, and academic progress. While they play a crucial evaluative role, examinations are also widely recognized as a significant source of psychological stress among school-going children and adolescents. Examination-related stress arises from the high stakes associated with academic performance, which often influences future educational and career opportunities. This

stress is further intensified by societal expectations, peer competition, and institutional pressures, making it a pervasive concern in contemporary educational settings. The conceptual understanding of stress in academic contexts is often grounded in the Transactional Model of Stress and Coping proposed by Lazarus and Folkman. This model posits that stress is not merely a response to external stimuli but a dynamic interaction between the individual and their environment, wherein stress occurs when perceived demands exceed the individual's coping resources. In the context of examinations, students may appraise academic demands such as syllabus load, performance expectations, and time constraints as overwhelming, particularly when they lack adequate coping mechanisms, thereby leading to heightened psychological distress.

In the Indian educational context, examination stress is particularly pronounced due to the highly competitive nature of academic systems and the cultural emphasis on scholastic achievement. Academic success is often viewed as a primary determinant of social mobility and future security, leading to substantial pressure from parents, teachers, and society at large³. Empirical evidence suggests that Indian students frequently report high levels of academic stress, driven by factors such as parental expectations, fear of failure, and intense competition for limited educational opportunities. These pressures are further exacerbated in board examination classes and during transitional academic stages, where performance outcomes are perceived as critical. The psychological manifestations of examination stress are multifaceted and can significantly impact students' mental health and overall functioning. Common symptoms include anxiety, depression, irritability, emotional instability, and cognitive impairments such as reduced concentration, memory difficulties, and decision-making challenges. Test anxiety, a specific form of performance-related anxiety, has been extensively documented among schoolchildren and is associated with both psychological distress and diminished academic performance⁶. Furthermore, chronic exposure to academic stress can contribute to long-term mental health issues, including burnout and learned helplessness.

Recent research has highlighted the broader implications of academic stress on adolescents' well-being. High levels of examination stress have been linked to sleep disturbances, including insomnia and poor sleep quality, which in turn negatively affect cognitive functioning and emotional regulation. Additionally, stress is associated with maladaptive behaviors such as avoidance, procrastination, and excessive screen time, which further compromise academic performance and mental health outcomes. A systematic review emphasizes that prolonged academic stress can lead to significant psychological morbidity among students, including increased risk of anxiety disorders and depressive symptoms. Adolescents represent a particularly vulnerable population in this context due to the developmental challenges associated with this life stage. The transition from childhood to adolescence involves significant biological, psychological, and social changes, including identity formation, increased autonomy, and heightened sensitivity to peer and societal expectations. These developmental factors can amplify the impact of academic stress, making adolescents more susceptible to emotional dysregulation and psychological distress. The World Health Organization underscores that mental health

conditions frequently emerge during adolescence, with stress-related factors playing a critical role in their onset and progression.

Moreover, the interplay between individual, familial, and environmental factors contributes to the complexity of examination stress. Variables such as socioeconomic status, type of schooling, parental involvement, study habits, sleep patterns, and digital media usage have been identified as significant determinants of stress levels among students. Despite growing awareness, there remains a lack of comprehensive research examining these factors in an integrated manner, particularly in rural and semi-urban Indian settings. Given the increasing prevalence of mental health concerns among school-going children and the critical role of academic stress as a contributing factor, there is a pressing need for systematic investigation into the psychological effects of examination stress and its associated determinants. Understanding these relationships is essential for developing targeted interventions, promoting adaptive coping strategies, and informing educational and mental health policies aimed at enhancing student well-being and academic success.

Research consistently highlights the high prevalence of examination stress among school students. A systematic review reported that approximately 30–70% of adolescents experience moderate to high levels of academic stress, indicating its widespread nature across educational settings. Parental expectations and academic pressure have been identified as primary stressors influencing students' psychological well-being. Studies demonstrate that excessive parental demands and high expectations significantly contribute to stress, anxiety, and emotional distress among adolescents. In the Indian context, academic pressure is often intensified by societal norms that equate academic success with future socioeconomic stability, further exacerbating stress levels. Sleep deprivation has emerged as a critical factor associated with examination stress. Evidence suggests that inadequate sleep and poor sleep quality are strongly linked to increased stress, reduced cognitive efficiency, and impaired academic performance. Adolescents experiencing academic stress often report irregular sleep patterns, which further aggravate psychological distress.

In addition, excessive screen time has been associated with negative mental health outcomes among adolescents. Increased use of digital devices, particularly during examination periods, has been linked to higher levels of anxiety, reduced attention span, and poor sleep hygiene. These factors collectively contribute to a decline in both academic performance and psychological well-being. Conversely, protective factors such as resilience, social support, and adaptive coping strategies play a crucial role in mitigating examination stress. Research indicates that students who employ effective coping mechanisms such as problem-solving, time management, and emotional regulation are better able to manage stress and maintain psychological well-being. Social support from family, peers, and teachers also serves as a buffer against stress, promoting resilience and positive mental health outcomes.

Overall, the literature underscores the multifactorial nature of examination stress, highlighting the interaction between individual vulnerabilities, environmental influences,

and coping resources. However, there remains a need for context-specific research, particularly in rural and semi-urban Indian populations, to better understand these dynamics and conduct targeted interventions.

Despite the growing body of literature on examination stress, there remains a significant lack of empirical research focusing specifically on rural and semi-urban regions of India. Most existing studies are concentrated in urban, metropolitan settings where educational resources, parental awareness, and access to mental health services are relatively better. In contrast, students in rural and semi-urban areas such as districts like Kolar in Karnataka face unique challenges, including limited academic infrastructure, lack of trained school counsellors, socioeconomic constraints, and reduced exposure to stress management resources. Additionally, cultural factors such as strong familial expectations, stigma surrounding mental health, and limited awareness about psychological well-being further exacerbate stress levels but remain underexplored in empirical research. This geographical and sociocultural gap limits the generalizability of findings and highlights the need for context-specific investigations.

Furthermore, existing research often examines examination stress in isolation, without integrating its psychological consequences (such as anxiety, depression, and reduced well-being) with associated contributing factors like parental pressure, sleep patterns, academic performance, and digital media use. There is also insufficient emphasis on the full adolescent age range (10–18 years), particularly early adolescents, who are at a critical developmental stage marked by emotional vulnerability and cognitive transitions. Most studies tend to focus on older adolescents preparing for board examinations, thereby neglecting younger students who may also experience significant stress. This lack of a comprehensive, multidimensional approach limits the understanding of how various factors interact to influence examination stress. Therefore, there is a pressing need for holistic research that simultaneously examines psychological outcomes and associated determinants across diverse adolescent groups within the Indian educational context.

Based on these gaps, the present study was conducted to assess the psychological effects of examination stress among school-going children and to identify factors associated with examination stress among this population. The study was guided by two hypotheses: (H1) there is no significant association between examination stress and psychological distress (anxiety and depression), and (H2) socio-demographic and academic factors do not significantly influence examination stress.

Method

This study employed a cross-sectional descriptive design and was conducted in government and private schools located in rural and semi-urban areas of Kolar district, Karnataka. A total of 300 students aged 10–18 years were selected using stratified random sampling.

Participants were included if they were school-going children aged 10 to 18 years, were currently appearing for or had recently appeared for examinations, were enrolled in

government or private schools in the selected rural and semi-urban areas, were able to read and understand the questionnaire language (English/Kannada) and provided assent together with written informed consent from their parents or guardians.

Participants were excluded if they had a previously diagnosed psychiatric disorder (e.g., major depressive disorder, anxiety disorders, ADHD), had severe medical or neurological conditions that could interfere with participation, were absent during data collection or unwilling to participate, or submitted incomplete or invalid questionnaire responses.

Data were collected using three instruments: a Socio-demographic Proforma, the Examination Stress Scale (ESS), and the Depression Anxiety Stress Scales (DASS-21).

Results and Discussion

Results

Table 1. Descriptive Statistics, Prevalence, Psychological Outcomes, and Factors Associated with Examination Stress (N = 300)

Variable Category	Variable	Result
Descriptive Statistics	Mean Age (years)	14.2 (SD = 2.3)
	Gender Distribution	Male: 52%; Female: 48%
	Low Stress	18%
Prevalence of Examination Stress	Moderate Stress	47%
	High Stress	35%
	Anxiety (Moderate–Severe)	58%
Psychological Outcomes	Depression (Moderate–Severe)	42%
	Stress & Anxiety	$r = .61, p < .001$
Correlation Analysis	Stress & Depression	$r = .54, p < .001$
	Parental Pressure	$p < .05$
	Poor Sleep Quality	$p < .05$
Associated Factors (Significant)	High Screen Time	$p < .05$
	Low Academic Performance	$p < .05$
	Parental Pressure	$\beta = .32, p < .001$
	Sleep Disturbance	$\beta = .28, p < .01$
Regression Analysis	Screen Time	$\beta = .21, p < .05$
	Model Summary	$R^2 = .48$

Note: SD = Standard Deviation, r = Pearson correlation coefficient, β = Standardized regression coefficient, R^2 = Coefficient of determination, These variables explained 48% of variance in examination stress ($R^2 = .48$)

Based on Table 1, it can be observed that this study involved a sample of 300 students (N=300). The mean age of the respondents was 14.2 years (SD=2.3), with a balanced gender distribution between males (52%, n=156) and females (48%, n=144).

Based on the measurement of examination stress levels, the majority of respondents fell into the moderate-to-high stress categories. A total of 47% of respondents experienced moderate stress, followed by 35% with high stress levels, while the remaining 18% were in the low stress category. These results indicate that the

majority of students (82%) face significant psychological pressure when facing examinations.

Psychological Outcomes

High levels of examination stress corresponded with compromised psychological well-being among the students. Evaluation of psychological outcomes revealed that more than half of the respondents (58%) experienced moderate-to-severe anxiety. Additionally, the prevalence of moderate-to-severe depression was observed in 42% of the sample.

Correlations Between Examination Stress, Anxiety, and Depression

Based on Table 1, it can be observed that this study Pearson correlation analysis demonstrated significant positive relationships between examination stress and psychological outcomes. Examination stress was strongly and positively correlated with anxiety ($r=0.61$, $p<.001$). Similarly, a significant moderate-to-strong positive correlation was found between examination stress and depression ($r=0.54$, $p<.001$). These findings indicate that higher examination stress is associated with elevated levels of anxiety and depressive symptoms.

Associated Factors and Multiple Regression Analysis

Bivariate analyses identified several factors significantly associated with examination stress ($p<.05$), including parental pressure, poor sleep quality, high screen time, and low academic performance.

Multiple regression analysis was conducted to evaluate the relative predictive contributions of these factors to examination stress. The regression model results are summarized in Table 1.

Parental pressure emerged as the strongest predictor of examination stress ($\beta=.32$, $p<.001$). Sleep disturbance also significantly predicted stress levels ($\beta=.28$, $p<.01$), followed by screen time ($\beta=.21$, $p<.05$). Collectively, the regression model accounted for 48% of the variance in examination stress ($R^2=.48$), with the remaining 52% explained by other variables not included in the model.

Discussion

The findings of the present study confirm that examination stress is highly prevalent among school-going children, with more than half of the participants experiencing moderate to high levels of stress. This is consistent with existing literature indicating that academic-related stress is a widespread issue among adolescents globally. The strong positive correlation observed between examination stress and psychological distress, particularly anxiety and depression, reinforces earlier research demonstrating that heightened academic pressure significantly contributes to adverse mental health outcomes among students. Parental pressure emerged as the most significant predictor of examination stress in this study. This finding reflects the sociocultural context of the Indian education system, where academic achievement is often closely tied to family expectations and future socioeconomic mobility. Previous studies have similarly highlighted that high parental expectations and pressure to perform academically are

strongly associated with increased stress, anxiety, and emotional distress among adolescents. Such pressures may lead to fear of failure, reduced self-esteem, and maladaptive coping behaviors.

Sleep disturbances were also found to be significantly associated with examination stress. The relationship between sleep and stress is bidirectional, wherein increased stress levels contribute to poor sleep quality and inadequate sleep further exacerbates emotional dysregulation and cognitive impairment indicating that sleep deprivation negatively impacts adolescents' psychological well-being and academic functioning. The Studies have shown that increased digital media use is associated with poor mental health outcomes, higher levels of stress, disturbed sleep, reduced academic preparation and well-being of children.

Furthermore, the findings underscore the critical role of coping mechanisms and resilience in mitigating examination stress. Students who lack adaptive coping strategies are more vulnerable to experiencing psychological distress. Effective coping strategies, such as problem-solving, emotional regulation, and seeking social support, have been shown to buffer the negative effects of stress and enhance psychological resilience among adolescents. Therefore, promoting adaptive coping skills within school settings is essential for improving students' mental health outcomes.

Overall, the present study highlights the multifactorial nature of examination stress and emphasizes the need for comprehensive interventions targeting individual, familial, and institutional factors.

Conclusion

Examination stress has emerged as a critical mental health concern among school-going children in India, significantly affecting their emotional well-being, cognitive functioning, and academic outcomes. The present study reinforces that a substantial proportion of students experience moderate to high levels of stress, which is strongly associated with anxiety and depressive symptoms. Recent Indian research similarly indicates that academic stress is positively correlated with depressive symptoms and contributes significantly to overall psychological distress among adolescents, highlighting the urgent need for early identification and intervention strategies.

The findings further emphasize the central role of contextual and environmental factors, particularly parental pressure and competitive academic systems. In the Indian context, high-stakes examinations and societal expectations intensify stress levels, often linking academic success with social mobility and self-worth. Empirical studies have shown that perceived parental pressure and critical home environments significantly factor. Lifestyle increase examination stress and anxiety, whereas emotional support acts as a protective -related factors, including poor sleep patterns and excessive screen time, also play a crucial role in exacerbating examination stress. Recent evidence suggests that sleep disturbances are closely linked with heightened test anxiety and reduced psychological resilience during examination periods. These findings indicate that

examination stress is a multidimensional phenomenon influenced by academic, familial, and behavioral determinants.

In conclusion, addressing examination stress among school-going children in India requires a comprehensive and multi-level approach. School-based mental health programs, parental awareness initiatives, and policy-level reforms aligned with frameworks such as the National Education Policy (NEP, 2020) are essential to create a supportive and less pressurizing academic environment. Strengthening coping skills, promoting resilience, and integrating mental health services within schools can significantly enhance students' psychological well-being and academic success.

Implications

The findings of the present study have important and policy implications for addressing examination stress among school-going children. From a clinical perspective, the high prevalence of stress, anxiety, and depression among students underscores the need for early identification through systematic screening programs within schools. Timely detection can facilitate prompt intervention, including counseling services, psychological support, and referral mechanisms for students experiencing significant distress, thereby preventing the progression of mental health problems.

From an educational standpoint, schools play a crucial role in fostering students' psychological well-being by integrating structured stress management programs into the curriculum. Interventions such as relaxation training, mindfulness practices, and cognitive-behavioral strategies can equip students with effective coping skills. Additionally, incorporating life skills education and resilience-building activities can enhance emotional regulation, problem-solving abilities, and adaptability among students, enabling them to better manage academic pressures.

At the policy level, there is a pressing need to integrate mental health services within the school system through dedicated school counsellors, mental health awareness programs, and collaboration with healthcare professionals. Furthermore, examination reforms aimed at reducing excessive academic pressure—such as continuous assessment methods, flexible evaluation systems, and a shift from rote learning to competency-based education can significantly alleviate stress among students. Collectively, these multi-level interventions can contribute to promoting a supportive educational environment that prioritizes both academic achievement and psychological well-being.

Contribution to the Existing Literature

This study contributes to the existing literature by addressing the limited empirical evidence on examination stress among school-going children in rural and semi-urban Indian contexts, particularly in regions like Kolar district, Karnataka. While previous research has largely focused on urban populations, the present study highlights the unique sociocultural and environmental stressors influencing students in underrepresented settings, including parental expectations, academic competition, and limited access to mental health resources. Furthermore, it integrates psychological outcomes such as

anxiety and depression with lifestyle and academic factors, offering a more holistic understanding of examination stress. By focusing on early and middle adolescence, the study also fills an important developmental gap in Indian research. The findings support the growing body of evidence emphasizing the need for school-based mental health interventions, culturally sensitive coping strategies, and policy-level reforms to mitigate academic stress and promote well-being among Indian students.

Limitations

The present study has certain limitations that should be acknowledged. First, the cross-sectional design restricts the ability to establish causal relationships between examination stress and its associated psychological outcomes, as data were collected at a single point in time. Second, the reliance on self-reported measures may introduce response bias, including social desirability and recall bias, which could affect the accuracy of the findings. Finally, the study was conducted within a specific rural and semi-urban setting, which may limit the generalizability of the results to other populations, such as urban students or those from different cultural and socioeconomic backgrounds.

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