



ACADEMIC BURNOUT AND SUICIDAL IDEATION AMONG YOUNG SCHOLARS: A CROSS-SECTIONAL STUDY

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Abstract

Academic burnout has been increasingly recognized as a widespread issue among students globally, particularly in the context of rising academic demands, competition, and more recently, the impacts of online learning during and after the COVID-19 pandemic. Recent studies have documented alarming prevalence rates across different student populations and educational contexts. The recent studies also show how suicidal tendencies are increasing in students (Mortier et al., 2018). The current cross sectional study was conducted to investigate the prevalence of academic burnout and its association with suicidal ideation among school students of Pakistan. The data was collected from students of different government and private schools of Karachi, Pakistan. For data collection Modified Scale for Suicide Ideation (MSSI) and the School Burnout Inventory (SBI) was used as standardized instruments. Further descriptive statistics, chi-square tests, and logistic regression analyses were used for data analysis through SPSS 25. Based on the finding it can be said that emotional exhaustion and cynicism emerged as the most influential factors associated with suicidal ideation. Moreover, findings also reveal the significant correlation between suicidal thoughts and academic burnout among students of Pakistan. In conclusion the study emphasizing the urgent need to tackle academic burnout as an important element affecting adolescent mental health and leading towards suicidal thoughts, which signify it, that is a public health issue that needs immediate attention such as early interventions and accessible mental health resources to support students' psychological well-being.

Keywords: Academic Burnout, Suicidal Ideation, School Students, Emotional Exhaustion, Adolescents.

Introduction

Adolescence is a formative stage that is defined with a number of acute shifts and transformations at the psychological, behavioural, and maturation levels. In this phase, the individuals' self-perception gets stronger; they seek to have connections to people, as well as deal with development of social, as well as scholastic expectations (Steinberg, 2017). Students who are aged between 13-16 years are particularly troubled by intense academic pressure and expectations from themselves and other adults. This causes stress that leads to academic burnout, a psychological disorder that involves emotional tiredness, dispassion, and feeling like one has failed to attain their expectations (Maslach et al., 2001). Burnout in adolescents raises concerns as it affects their developmental pathways and academic and social well-being (Salmela-Aro & Tynkkynen, 2012).

Academic burnout has been shown to be a major contributor of adolescent psychological turmoil in the form of depression, and anxiety, or even thoughts of taking one's life (Walburg, 2014). Out of these, suicidal thoughts which encompass self-abuse and formulating or visualizing theories of approaching suicide are especially troubling. Two million adolescents kill themselves every year marking the second highest rate of deaths in this population. This requires global attention and preventative measures (WHO, 2019). Adolescents experiencing feelings of academic despair may be overwhelmed by academic obligations, which



may push them to engage in suicidal ideation and behavior (Borrelli, et al., 2022).

An expanding body of literature highlights the ‘Olympian’ level to which the stress of education and feeling of being unproductive extends its influence on the mental wellbeing of teenagers in all cultures. Chinese researchers conducted a research and reported that the feeling of being unproductive because of heavy workloads was positively correlated with feeling depressed, anxious and even suicidal among high school students in China (Liu & Xie, 2022). In 2021 adamant in accenting that burnout, which adolescent students go through during academic life, is a significant risk factor that leads to poor mental health, even suicidal thoughts, within the framework of the Latin American population (Caballero et al., 2022). Further, research pointed out that students suffering from academic burnout are more likely to have mental health issues and are also likely to employ negative coping mechanisms due to academic pressure (Fiorilli et al, 2022). The findings illustrate the scale of the problem, which is both global and diverse at the same time.

As much as a number of studies have investigated the connection between burnout and suicidal thoughts in adolescents a majority have focused on western and East Asian countries, and a scant few have explored this among South Asian countries, particularly Pakistan. School children in Pakistan are however confronted by a unique set of socio cultural constraints including but not limited to stringent academic.

Literature Review

In recent years, there has been growing concern over the mental health challenges faced by students, with suicidal ideation and academic burnout emerging as significant issues. Suicidal ideation, defined as thoughts of engaging in behaviour intended to end one’s life, often reflects profound emotional distress and feelings of hopelessness (Klonsky et al., 2016). Understanding the relationship between these two phenomena is critical, as academic burnout may not only impair academic performance but also contribute to the development of serious mental health crises among students (Salmela-Aro & Upadyaya, 2014). Recent studies indicate that suicidal ideation in Pakistan is alarmingly high, especially among young adults and university students. For instance, a survey conducted among university students in Karachi revealed that approximately 31% reported experiencing some form of suicidal ideation (Ahmer et al., 2008).

Factors of Suicidal Ideation

Suicidal ideations in adolescents are associated with many variables such as self-esteem, locus of control, peer rejection, drug addiction, beingbullied, low academic performance, physical or sexual abuse and burnout. Suicide is a complex phenomenon influenced by a combination of psychological, biological, social, and environmental factors. Understanding these factors is essential for effective prevention and intervention efforts, particularly among vulnerable groups such as students (Turecki & Brent, 2016). Another factor could be biological influences on suicide include genetic predisposition, neurochemical imbalances (such as low serotonin levels), and dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis, which is involved in the stress response (Mann & Rizk, 2020). Social and environmental factors are also very influencing as social stressors such as bullying, relationship problems, discrimination, and social isolation are major contributors to suicide risk among students (Holt et al., 2015).

Effects of Suicidal Ideation

Individuals experiencing suicidal ideation often suffer from Psychological and Emotional Effects such as intense emotional distress, including feelings of hopelessness, worthlessness, guilt, and shame (Kessler et al., 1999). Another effect could be cognitive and behavioural as suicidal ideation impairs cognitive functions significantly, it often leads to impaired cognitive functioning, such as difficulty concentrating, decision-making problems, and distorted thinking patterns such as catastrophizing, all-or-nothing thinking, and personalizing blame. (Witte et al., 2017). Persistent suicidal thoughts can also negatively impact physical health as they are strongly associated with poor physical health outcomes such as sleep disturbances, including insomnia and nightmares, are highly prevalent (Bernert et al., 2015). It also has academic and occupational consequences, as among students and working-age individuals, suicidal ideation correlates with academic failure including lower grades and increased dropout rates, increased absenteeism lack of engagement with academic or professional responsibilities, and occupational dysfunction. The inability to perform at school or work can, in turn, worsen feelings of failure and hopelessness (Mortier et al., 2018).



Academic burnout

Salmela-Aro and Read (2017) defined academic burnout as “an outcome of a long-term mismatch between students’ academic demands and their resources, leading to exhaustion, cynicism, and feelings of inadequacy.” They also linked burnout to academic disengagement (Salmela-Aro & Read, 2017). Moreover, Seibert et al. (2023) suggested a modern, more holistic view: academic burnout is “not only the exhaustion from academic pressures but also the erosion of personal identity and self-esteem tied to academic performance.” This reflects the psychological damage students experience when their self-worth becomes dependent entirely on academic success. Recent studies suggest a high prevalence of academic burnout among Pakistani students. Nearly 48% of university students in Lahore reported moderate to severe burnout symptoms, particularly emotional exhaustion (Zubair & Kamal, 2021).

Factors of Academic Burnout

While academic burnout is a global phenomenon, its contributing and risk factors vary significantly based on cultural, socioeconomic, and institutional contexts. In Pakistan, several unique factors compound students' vulnerability to academic burnout. One of the most salient contributors in the Pakistani context is high parental and social expectations, particularly for students in professional fields such as medicine and engineering. Families often equate academic success with social mobility and family honour, placing tremendous pressure on students to perform (Iqbal et al., 2015). Several risk factors have been empirically linked to academic burnout in Pakistan. Perceived academic stress, including frequent examinations and tight deadlines, is a major predictor of burnout symptoms (Khan et al., 2013).

Effects & Consequences of Academic Burnout

Chronic fatigue, sleep disturbances, headaches, and weakened immune functioning are frequently reported among burned-out students (Ahmed et al., 2018). These health problems can further impair academic performance, creating a vicious cycle of stress and underachievement. In response to prolonged stress and exhaustion, some students resort to unhealthy coping strategies, including smoking, drug use, and excessive screen time. One of the researches reported a rise in substance use among Pakistani students as a coping mechanism for academic stress. These behaviours not only exacerbate physical and mental health problems but can also lead to long-term addiction and lifestyle issues. (Khan et al., 2013).

Theories of Academic Burnout

Various psychological and educational theories help explain the mechanisms behind burnout, providing insights into its causes and potential interventions. Among all these are few related theories which are related to the concern variables.

Maslach's Burnout Theory. One of the foundational frameworks for understanding burnout is originally developed for occupational settings, it has been adapted to educational environments through the Maslach Burnout Inventory-Student Survey (MBI-SS). According to Maslach and Jackson (1981), burnout comprises three dimensions: emotional exhaustion, depersonalization (or cynicism), and a reduced sense of personal accomplishment.

Job Demands-Resources (JD-R) Model. It extends the burnout framework by considering the balance (or imbalance) between academic demands and available resources. Demerouti et al. (2001) argue that high academic demands, such as exams, heavy workloads, and time pressure, contribute to stress and exhaustion. However, the presence of adequate resources like supportive teachers, autonomy, and peer collaboration can buffer these negative effects. In this view, burnout arises when demands chronically outweigh the resources available to the student.

Cognitive Appraisal Theory. The theory was developed by Lazarus and Folkman (1984), it explains how an individual's perception of stress contributes to burnout. Students evaluate academic challenges through two types of appraisal: primary (whether the event is threatening) and secondary (whether they have the resources to cope). Burnout is more likely when students perceive academic tasks as overwhelming and believe they lack the skills or support to succeed. This highlights the subjective nature of burnout and the importance of cognitive coping strategies.

Theories of Suicidal Ideation. Suicide among students is a complex and multifaceted issue influenced by psychological distress, social pressures, and personal vulnerabilities. Multiple theoretical frameworks have



been developed to explain suicidal behaviour, particularly in young people navigating academic and developmental challenges.

Joiner's Interpersonal-Psychological Theory of Suicide (IPTs). According to Joiner (2005), suicide occurs when three key conditions are met: perceived burdensomeness, thwarted belongingness, and the acquired capability for suicide. Students who feel like a burden to others (e.g., family or peers) and simultaneously experience social isolation or rejection may develop suicidal ideation. The capability to carry out suicide, Joiner posits, is acquired through exposure to pain, trauma, or repeated self-harm, which reduces the natural fear of death. IPTs helps explain why some students transition from thinking about suicide to attempting it.

Cry of Pain Model. The model was developed by Williams and Pollock (2001), frames suicide as a response to three interacting components: defeat, entrapment, and lack of rescue. Students facing academic failure, relationship breakdowns, or family conflict may feel defeated. If they also feel trapped with no means of escape or support, suicidal behaviour may appear as a solution. This model highlights the importance of perceived hopelessness and a lack of support systems in student populations.

Beck's Cognitive Theory of Depression and Suicide. It emphasizes the role of negative thought patterns, such as hopelessness and cognitive distortions. According to Beck et al. (1975), suicidal students often display rigid, all-or-nothing thinking and have a negative view of themselves, their environment, and the future. The Hopelessness Theory, a cognitive extension, specifically identifies hopelessness as a proximal predictor of suicide (Abramson et al., 1989). This theory is especially relevant for students struggling with academic stress, perfectionism, and internalized failure.

Escape Theory of Suicide. The theory suggests that individuals attempt suicide to escape aversive self-awareness and psychological distress (Baumeister, 1990). Students facing chronic stress, shame, or identity confusion may feel overwhelmed and seek to "escape the self" through suicidal acts. The theory emphasizes the importance of self-esteem and emotional regulation in managing suicidal ideation.

Hypothesis

The current was design to explore the will following hypotheses:

H₁: Academic burnout is expected to correlate with levels of suicidal ideation among students.

H₂: Emotional exhaustion is hypothesized to be associated with higher levels of academic burnout.

H₃: A positive association is anticipated between cynicism and academic burnout.

H₄: Lower academic efficacy is likely to be linked with increased academic burnout.

Methodology

Study Design

A cross-sectional study design was used to conducted the study

Sample Size and Sampling Technique

A purposive sampling strategy was used to select a total of 30 students aged 13 to 16 years attending diverse public and private schools in Karachi. Students who fit these criteria and were prepared to take part in the study were recruited: 8th through 11th graders, within the age range of 13-16 years, and active students.

Data Collection Tools

Modified Scale for Suicide Ideation (MSSI)

It is a tool designed to measure the severity and characteristics of suicidal thoughts. Adapted from the original Scale for Suicide Ideation (SSI), the MSSI aims to provide enhanced sensitivity and reliability, making it suitable for diverse clinical and research applications. It assesses various dimensions of suicidal ideation, including the frequency, intensity, and specific plans or intentions, offering a detailed view of an individual's mental state (Miller et al., 1986).

School Burnout Inventory (SBI)

It is a widely used psychological assessment tool designed to measure burnout in school-aged adolescents. Developed by Salmela-Aro, Kiuru, Leskinen, and Nurmi in 2009, the SBI addresses the unique stressors students face in academic environments. It focuses on the emotional and cognitive impacts of



academic demands, providing insights into the extent to which these pressures affect students' mental health and academic performance.

Data Collection Procedure

Informed consent was obtained from the students and their parents. Surveys were administered in a classroom setting under the supervision of researcher. Participants were assured of confidentiality, and permission letter was obtained from the authorizes of the schooling system.

Ethical Consideration and Consent

This study adhered to the highest ethical standards to ensure the protection and well-being of all participants. Ethical approval was obtained from the Institutional Review Board (IRB) prior to the commencement of data collection. Participants were informed about the purpose of the study, their voluntary participation, and their right to withdraw at any point without any penalty.

Informed consent was obtained from all participants, and confidentiality was strictly maintained throughout the research process. No identifying information was collected, and all responses were anonymized and used solely for academic purposes. Due to the sensitive nature of the topic, particularly the focus on suicidal ideation, participants were provided with information about available mental health resources and were encouraged to seek professional support if needed.

Care was taken to ensure that the questions did not cause undue distress, and the researchers remained mindful of the emotional impact the survey may have had on participants. The study complied with the ethical guidelines outlined by the American Psychological Association (APA) and followed all institutional and national research ethics protocols.

Statistical Analysis

Data were analysed using SPSS Version 25. Quantitative data were used to describe frequencies of demographic information, burnout and suicidal thoughts. Chi-square tests was used to establish the relationship between academic burnout and suicidal ideation separately. Preferred testing for the evaluation of the predictors of suicidal ideation was logistic regression analysis.

Results

Participant Characteristics

There were 30 students selected, with a mean age of 14.5 years with SD = 1.2. Of these, 52% were female and 48% were male. The majority of the participants were in grade 9 (42%), followed by grade 8 (35%) and grade 10 (23%) (Table 1).

Table 1

Participant Characteristics and Prevalence of Academic Burnout (SBI)

Grade	Percentage (%)	Burnout Dimension	Prevalence of Burnout (%)
8	35	Emotional Exhaustion	68.3
9	42	Cynicism	45.7
10	23	Reduced Academic Efficacy	37.2

M (Age) = 14.5, N=30

Table 2

Contingency table

Burnout Level	Suicidal Ideation: Yes	Suicidal Ideation: No	Total
Low	2	6	8
Moderate	9	2	11
High	11	0	11
Total	22	8	30

Assumptions based on percentages: Low burnout: 25% of 8 = 2 with suicidal ideation, Moderate burnout: 81.8% of 11 \approx 9, and High burnout: 100% of 11 = 11



Table 3

Chi-Square Test

Chi-Square statistic (χ^2)	df	p-value
13.96	2	0.00093

Prevalence of Academic Burnout

According to descriptive statistics, 48.5% of students who took the School Burnout Inventory (SBI) reported having high levels of academic burnout. Emotional exhaustion was the most frequently reported burnout dimension, with 68.3% of students reporting significant academic demands-related fatigue and stress. Cynicism (45.7%) and decreased academic efficacy (37.2%) (Appendix table 1).

Prevalence of Suicidal Ideation

The prevalence of suicidal ideation, measured using the Modified Scale for Suicide Ideation (MSSI) (Miller et al., 1986), was found to be 21.8% among students who reported high academic burnout. Suicidal ideation was significantly higher in students who experienced greater emotional exhaustion and cynicism (table 1).

Association between Academic Burnout and Suicidal Ideation

The relationship between academic burnout and suicidal thoughts was evaluated using a correlation coefficient analysis. A significant positive correlation between the variables was found in the results ($r = 0.45$, $p < 0.01$), suggesting that suicidal ideation was linked to higher levels of academic burnout. In particular, students with high levels of cynicism were 2.1 times more likely to report suicidal thoughts (OR = 2.1, 95% CI: 1.3-3.4) and students with high levels of emotional exhaustion were 2.8 times more likely to have suicidal ideation (OR = 2.8, 95% CI: 1.7-4.6) (table 4).

Table 4

Association between Burnout and Suicidal Ideation

Burnout Level	Coefficient R	Odds Ratio (OR)	95% Confidence Interval (CI)
Academic Burnout	0.45		
High Emotional Exhaustion		2.8	1.7-4.6
High Cynicism		2.1	1.3-3.4

**** $p < 0.05$, $N=30$**

Discussion

The findings of this research emphasize important conclusions about academic burnout and its connection to suicidal thoughts in adolescents. The occurrence of academic burnout in the sample was shockingly high, as almost half of the students (48.5%) indicated significant levels of burnout. Emotional exhaustion was identified as the primary aspect of burnout, impacting 68.3% of students, with cynicism at 45.7% and diminished academic efficacy at 37.2%. These findings align with earlier research showing that academic stress and burnout are prevalent among teenagers, especially those in high school (Liu & Xie, 2022; Caballero et al., 2021). Another recent research also indicates that students who feel consistently overwhelmed are at higher risk of developing severe mental health issues, including suicidal thoughts (Zhou et al., 2023). Moreover Cynicism, or a detached attitude toward schoolwork, also strongly correlated with suicidal ideation, suggesting that disengagement from academic activities may be a warning sign of underlying psychological distress (Lee et al., 2023).

Teenagers frequently experience significant pressure to excel in their studies, managing lofty expectations from parents, educators, and society, which may result in emotional fatigue and feelings of disconnection or skepticism regarding their academic pursuits (Maslach et al., 2001).

The discovery that 21.8% of students facing significant academic burnout indicated having suicidal thoughts is especially alarming. This finding aligns with the increasing amount of studies connecting academic stress to mental health problems like depression, anxiety, and suicidal ideation (WHO, 2019). Suicidal thoughts were notably more frequent among students who indicated elevated levels of emotional fatigue and



skepticism. These results indicate that the mental strain of academic burnout could lead to more serious mental health issues. Emotional exhaustion, specifically, seems to be a significant predictor of suicidal thoughts, which is consistent with previous research highlighting the influence of emotional distress on the emergence of suicidal ideation (Kim et al., 2020).

The link between academic burnout and suicidal thoughts, indicated by the correlation coefficient ($r = 0.45$, $p < 0.01$), highlights the necessity for focused interventions. Students exhibiting high emotional exhaustion were 2.8 times more inclined to have suicidal thoughts, while those with elevated cynicism were 2.1 times more likely. These results indicate that emotional burnout and a negative perspective on academic success could act as crucial signs for recognizing students vulnerable to significant mental health problems. The odds ratios suggest that tackling emotional exhaustion and cynicism in students might lower the likelihood of suicidal thoughts.

These findings hold significant implications for educational approaches and mental health strategies. Schools must emphasize mental health assistance and alleviate the academic stresses that lead to burnout. Employing methods to handle stress, foster resilience, and offer emotional assistance may aid in reducing the effects of academic burnout. Additionally, educators and caregivers need to recognize the indicators of burnout and thoughts of suicide to take early action and offer suitable assistance.

Therefore, the results of this research highlight the urgent need to tackle academic burnout as an important element affecting adolescent mental health. Suicidal thoughts, closely associated with burnout, signify a significant public health issue that demands urgent action. Future studies ought to investigate the efficacy of different interventions designed to alleviate academic burnout and avert mental health challenges like suicidal thoughts in adolescents of school age.

Limitations & Recommendations

The study was conducted in urban areas, which may limit generalizability to rural populations. Future studies should consider longitudinal designs and explore interventions that can effectively reduce burnout and its psychological consequences. To address academic burnout and its associated risks, schools should implement stress management programs, set realistic academic expectations, and increase access to mental health support services. Encouraging peer support networks and extracurricular activities can help students cope with stress. Additionally, mental health education should be integrated into the curriculum to reduce stigma and promote early intervention. Schools should also consider reducing academic loads to prevent burnout and ensure students have time for rest. Collaboration with mental health professionals is key to developing effective strategies for supporting students' well-being.

Conclusion

Academic burnout is a widespread and concerning issue among school students aged 13 to 16 in Pakistan, with a significant proportion of young learners experiencing high levels of emotional exhaustion, cynicism, and reduced academic efficacy. This state of chronic stress and disengagement from academic demands has been found to be strongly associated with suicidal ideation, highlighting a serious mental health risk within this vulnerable population. Given the profound impact that academic burnout can have on adolescents' psychological well-being, it is essential to implement comprehensive strategies aimed at early identification and intervention. Providing accessible mental health support services, promoting awareness about burnout symptoms among educators and parents, and fostering a nurturing and inclusive school environment can play pivotal roles in mitigating these risks. Such efforts not only improve students' academic engagement and performance but are also critical for safeguarding their overall mental health and preventing the development of suicidal thoughts and behaviours. Prioritizing these interventions is vital to support adolescents in navigating academic pressures and promoting resilience during this crucial developmental period.

Conflict of Interest

No conflict of interest

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