

Research Paper

## Examining the Role of Grit and Mindfulness as Protective Mechanisms Against Academic Burnout in University Students: A Mixed-Methods Approach

Radhika Jalla<sup>1\*</sup>, Dr. Mohammad Imran Hussain<sup>2</sup>

### ABSTRACT

This study employs a mixed-methods approach to examine the protective effects of mindfulness and grit in preventing academic burnout among university students. Both grit and mindfulness were adversely linked with burnout ( $\beta = -0.470$  and  $\beta = -0.353$ , respectively,  $p < .001$ ), and grit strongly predicted greater levels of mindfulness ( $\beta = 0.721$ ,  $p < .001$ ), according to quantitative data evaluated using a mediation model. Additionally, a significant Sobel test result ( $Z = -5.22$ ) supported the finding that mindfulness partially mediated the association between grit and burnout, accounting for 54.15% of the total impact. The statistical results were supplemented by qualitative findings that shed light on five main themes: the dual role of grit in encouraging perseverance but also possibly contributing to fatigue; mindfulness as a vital tool for emotional control and resilience; the negative effects of academic pressure on intrinsic motivation; the consequences of institutional neglect on students' well-being; and the protective effect of peer support. In order to support long-term student engagement and psychological well-being, our findings highlight the significance of cultivating both grit and mindfulness in educational settings.

**Keywords:** *Academic burnout, Grit, Mindfulness, Student resilience, Mediation analysis*

The increasing incidence of academic burnout among college students has become a major worry due to the demanding nature of higher education. Students' psychological well-being and academic performance are jeopardized by academic burnout, which is characterized by emotional tiredness, depersonalization, and a diminished feeling of personal accomplishment (Madigan et al., 2024). Psychological concepts like grit and mindfulness have drawn more attention as students try to cope with academic challenges because of their ability to improve resilience and reduce burnout (Gan et al., 2023; Duckworth et al., 2007). Grit, an attribute of personality defined as persistent effort and excitement for long-term goals, enables people to stick with difficult projects in the face of failures and difficulties (Duckworth et al., 2007). Evidence consistently demonstrated that grit is an important predictor of both psychological resilience and academic success, particularly under duress (Bazelais et al., 2016).

<sup>1</sup>Student, Amity University, Uttar Pradesh, India

<sup>2</sup>Assistant Professor, Amity University, Uttar Pradesh, India

\*Corresponding Author

Received: May 15, 2025; Revision Received: October 10, 2025; Accepted: October 14, 2025

## Examining the Role of Grit and Mindfulness as Protective Mechanisms Against Academic Burnout in University Students: A Mixed-Methods Approach

Grit, which is defined as the persistent drive and tenacity toward long-term objectives, has become a crucial psychological characteristic in the areas of academic performance, career advancement, and general well-being. Grit was first proposed by Angela Duckworth and has since developed into a multifaceted notion that has been studied from a variety of psychological and neuroscientific perspectives. In a recent study, Datu et al. (2022) investigated the causes and effects of grit in working adults using a transpersonal psychology viewpoint. The results of their study indicated that grit is strongly linked to psychological happiness, optimism, and a stronger sense of purpose in life—all of which are characteristics that together promote long-term adaptive functioning. Interestingly, they focused on how brain systems, specifically the striatum and prefrontal cortex, shape individual variations in resilience and grit. These areas of the brain are important for reward processing and executive functioning, suggesting that grit could potentially be neurologically supported by a person's ability to control their emotions and make plans for the future. Aguerre et al. (2021) analysed electrophysiological findings that connected grit to brain activity related to self-regulation and emotional control, further elaborating on the neurobiological foundations of grit. Their research identified particular neural signatures in the dorsolateral prefrontal cortex and anterior cingulate cortex, regions responsible for effortful control and negative feedback management, both of which are critical for overcoming obstacles and persevering in the face of failure.

In their proposal of a triarchic model of grit that consists of passion, perseverance, and adaptability, Datu et al. (2021) further defined theoretical developments in grit research. Extending the conventional dual-component framework, this model highlights the significance of adaptable pursuit of goals and cognitive-emotional adaptation in dynamic settings. By addressing some of the concerns raised about the conceptual rigor and measurement constraints of grit, this improvement promoted a more inclusive and wide-ranging operationalization of the notion. The importance of grit in fostering academic resilience and mental health is further supported by empirical data from educational contexts. D'Souza (2018) studied how grit and resilience affect college students' mental health outcomes in her undergraduate thesis. Vainio et al. (2015) evaluated the mechanisms that mediate the relationship between grit and wellbeing. Through the use of concepts like authenticity and feeling of coherence, their research discovered both direct and indirect links involving grit and subjective well-being.

Chronic stress, mental fatigue, and a lessened sense of success brought on by lengthy scholastic obligations are the hallmarks of academic burnout, a widespread problem that affects students all over the world. It shows itself as a lack of motivation, detachment, and powerlessness, which eventually affects kids' academic performance and general well-being. Creating successful therapies requires an understanding of the causes of burnout and how common it is. High academic pressure, insufficient support networks, and ineffective time management were found to be major predictors of university student burnout by Liu et al. (2023). This supports the general agreement that burnout results from the accumulated pressures of college life, which may reduce motivation, affect cognitive performance, and cause emotional fatigue. Building on this understanding, a longitudinal study by Pham Thi and Duong (2024) revealed that burnout has a negative effect on students' academic performance, exposing a vicious cycle in which students who are burnt out find it difficult to meet academic expectations, which exacerbates their stress and fatigue. March-Amengual et al. (2022) investigated the connection between psychological distress and burnout in freshman year college students and found that there was a significant association between

## Examining the Role of Grit and Mindfulness as Protective Mechanisms Against Academic Burnout in University Students: A Mixed-Methods Approach

burnout, psychological distress, and deteriorating academic performance. In addition, Rahmatpour et al. (2019) showed that burnout hinders students' long-term educational and professional opportunities in addition to impairing their academic performance. Cheung et al. (2022) offered more insight into the relationship among grit, mindfulness, and burnout. They discovered that grit and mindfulness combine to build resilience, which helps students better handle academic stress. The association between mindfulness and less mind-wandering was shown to be mediated by self-compassion and grit, according to Cheung and Djekou (2024), underscoring the significance of developing self-compassion as a protective factor against burnout. In a similar vein, Cornelissen (2022) reported that grit, mindfulness, and a sense of identity were predictive of perseverance and adjustment in academic environments.

Concurrently, it has been demonstrated that mindfulness is an awareness of the present moment without passing judgment—improves psychological functioning by encouraging stress reduction, emotional resilience, and self-regulation (Gan et al., 2023). Mindfulness-based therapies have demonstrated efficacy in mitigating burnout symptoms and improving mental health, underscoring mindfulness as a useful tool for managing academic pressures (Xu et al., 2017). Burnout occurs when demands, such as academic expectations, surpass the resources available, including psychological qualities, according to the demands-resources model (Bakker & Demerouti, 2007). Grit and mindfulness are viewed in this paradigm as individual resources that improve resilience and adaptive coping, hence preventing burnout (Teuber et al., 2021). According to the job demand resource model, burnout happens when demands outweigh available resources. However, by promoting resilience and adaptive functioning, personal resources like grit and mindfulness can lessen the effects of stresses (Bakker & Demerouti, 2017). A wide definition of mindfulness is the capacity to remain present-centered and nonjudgmental about one's thoughts, feelings, and experiences. Through emotional regulation and attentional control, it helps people react to pressures from both inside and outside of themselves in a flexible way. Mindfulness has been investigated for its potential to improve academic performance and cognitive functioning in a range of demographics and educational contexts. MBIs are systematic activities that foster awareness of the present moment and acceptance, and they have been shown to be consistently helpful in lowering mental tiredness (Cao et al., 2022). Mindfulness is a cognitive-emotional tool that enhances emotional control and helps academic functioning, according to Datu et al. (2023). Through cognitive reappraisal—a process by which students reframe academic obstacles in less stressful ways—mindfulness was found to be a predictor of higher academic commitment among high school students. In accordance with Napora (2013), mindfulness has a favourable impact on students' academic performance and cognitive engagement in higher education. Additionally, mindfulness was operationalized through classroom-based meditation techniques. Her research revealed that students who practice mindfulness are better able to stay engaged and mentally present, which has a greater impact on academic results than just cognitive engagement. Mindfulness has been demonstrated to enhance fundamental executive processes that are necessary for learning in younger students. Mindfulness has been recognized by Filipe (2024) as a developmental technique that improves cognitive flexibility, attentional control, and inhibitory control—skills essential for academic achievement. According to Schussler et al. (2016), mindfulness training also helped primary kids' cognitive inhibition and a data-driven processing, highlighting its potential to increase focus and curb impulsivity in the classroom.

## Examining the Role of Grit and Mindfulness as Protective Mechanisms Against Academic Burnout in University Students: A Mixed-Methods Approach

This concept is consistent with research that shows mindfulness lowers stress and emotional reactivity, while grit helps students overcome obstacles (Teuber et al., 2021; Gan et al., 2023). Grit and mindfulness are coping strategies that are further clarified by the Transactional Model of Stress and Coping as developed by Lazarus and Folkman (1984). Whereas mindfulness promotes emotion-focused coping by improving self-regulation and emotional awareness, grit is associated with problem-focused coping, in which pupils actively strive to overcome obstacles. In contrast, SDT stresses that when people's psychological requirements for autonomy, competence, and relatedness are satisfied, they experience well-being and intrinsic drive (Ryan & Deci, 2000). By encouraging autonomous behaviour and emotional control, mindfulness and grit support SDT's tenets and lessen exhaustion (Teuber et al., 2021).

### *Aim & Objective*

This study examines how grit and mindfulness affect academic burnout on an individual and combined level. It postulates that by encouraging internal drive, self-control, and stress resistance, both qualities operate as buffers against burnout. The study also investigates how mindfulness mediates the link between grit and burnout, looking at how mindfulness increases grit's ability to reduce burnout.

## **REVIEW OF LITERATURE**

Grit has attracted a lot of interest in educational psychology as it is described as persistent desire and tenacity toward long-term objectives (Duckworth et al., 2007). Studies reveal a robust association between academic achievement and grit. According to Bazalais et al. (2016), grit is a key predictor of academic achievement in science, highlighting the fact that perseverance and consistent effort are more important than skill in attaining educational goals. In accordance with Jumaat et al. (2020), medical students' academic burnout is negatively correlated with their grit, indicating that grittier students are better able to handle the demands of rigorous curricula. However, studies also point significant drawbacks. According to Credé et al. (2016), grit's incremental validity over more conventional concepts like conscientiousness was called into scepticism. The demands-resources model was used by Teuber, et al. (2021) to investigate the function of grit in burnout prevention. They found that grit successfully reduces burnout when students are able to make good use of their resources. Grit's protective impact against burnout among psychologists in schools was also highlighted by Miles (2024), highlighting its significance in high-pressure settings. However, questions concerning grit's ability to predict outcomes in a variety of settings and populations still exist.

According to Kabat-Zinn (1990), mindfulness is present-moment awareness with nonjudgmental acceptance. It is associated with resilience, stress reduction, and emotional control. Mindfulness-based therapies (MBIs) have been shown to be successful in addressing academic burnout. Zhang and Li (2020) and Gan et al. (2023) also attested to the fact that mindfulness therapies lessen burnout symptoms by improving coping mechanisms, emotional control, and self-compassion. Additionally, mindfulness mediates the development of resilience and grit. In order to show how mindfulness strengthens grit by lowering distractions and promoting attention, Macapagal & Sangines (2021) investigated the intermediary impact of mindfulness connecting grit and study habits during COVID-19. Cheung et al. (2022) emphasized how poor childhood experiences affect academic performance, with grit and mindfulness reducing the negative effects. According to Cheung & Djekou (2024), mindfulness also improves self-compassion and grit, which protects

## **Examining the Role of Grit and Mindfulness as Protective Mechanisms Against Academic Burnout in University Students: A Mixed-Methods Approach**

against burnout and mental wandering. Additionally, Xu et al. (2017) found that self-compassion acts as a mediator in the association between burnout and mindfulness, confirming that students who exhibit higher levels of mindfulness also have lower burnout rates.

A cross-cultural investigation of the connection between grit and mindfulness among college students in the US, Thailand, and New Zealand was carried out by Mongkolrat (2019). This study brought to light the ways in which cultural settings might affect how these two notions interact. The study discovered that in all three nations, mindfulness and grit had a positive correlation. This suggests that the ability to focus and control emotions (mindfulness) might improve tenacity and enthusiasm for long-term objectives (grit). Variations in the intensity of this link, however, may be explained by cultural variances in mindfulness practices. Similarly, by concentrating on Indonesian students, Sari et al. (2020) expanded on this notion. Their study found a significant relationship between grit and mindfulness, especially among university seniors, suggesting that mindfulness exercises might support students in staying motivated and focused despite the demands of school. The results of this correlational study, together with those of Mongkolrat (2019), established the universality of the link between grit and mindfulness, indicating that both concepts tend to support one another in encouraging goal-directed conduct irrespective of cultural background.

The association between grit and mindfulness among UK meditators was investigated by Cheung et al. in 2021. The association underlying mindfulness and grit was shown to be considerably impacted by self-compassion, which they presented as an intermediary in this relationship. Their findings implied that self-compassion may strengthen the perseverance and passion that define grit, while mindfulness alone may not be enough to cultivate it. The definition of grit was broadened by this study, which demonstrated the importance of self-compassion in fostering emotional resilience and maintaining long-term goal commitment. Cao et al. (2022) performed a comprehensive study on the application of mindfulness to lessen mental weariness, which is frequently a hindrance to sustaining grit and endurance in the framework of mindfulness-based therapies. Their results demonstrated how mindfulness-based techniques might help replenish mental energy, which may then make it easier to exert consistent effort and participate in goal-directed activities. These findings are consistent with those of Cheung et al. (2021), who found that self-compassion and mindfulness help strengthen grit, especially in high-demand settings like the workplace and classroom.

Additionally, studies suggest that grit and mindfulness may improve academic achievement and cognitive growth. In pilot research investigating the cognitive benefits of mindfulness training, Schussler et al. (2016) discovered notable enhancements in task performance and cognitive engagement. This is consistent with previous research, such that done by Napora (2013), which looked at how mindfulness and academic performance were affected by classroom meditation techniques. According to their findings, mindfulness therapies can help kids acquire grit by improving their cognitive attention, which is crucial for academic achievement. Filipe (2024) examined how mindfulness affects children's and teenagers' cognitive development, emphasizing how it improves academic performance, self-control, and attention. According to these findings, mindfulness may help people develop grit by enhancing their ability to regulate their thoughts and emotions.

The combined benefits of mindfulness, grit and resilience provide encouraging paths to both academic achievement and the avoidance of burnout. In their investigation of grit, feeling of

## Examining the Role of Grit and Mindfulness as Protective Mechanisms Against Academic Burnout in University Students: A Mixed-Methods Approach

belonging, and mindfulness as indicators of student adjustment and perseverance, Cornelissen (2022) came to the conclusion that sense of identity and mindfulness had a greater effect on student retention than grit alone. According to a meta-analysis by Calo et al. (2024), interventions aimed at fostering grit, resilience, and a growth mindset in health professional students had a substantial positive impact on both academic achievement and burnout prevention. Furthermore, Madigan et al. (2024) investigated the intricate connection between performance, motivation, and burnout and proposed that improving grit and mindfulness fosters intrinsic motivation, which in turn improves academic accomplishment. Rahmatpour et al. (2022) emphasised the value of resilience and self-efficacy in addition to grit, showing how resilience-building exercises and physical activity may lessen burnout.

There are still important gaps in the literature, despite the fact that grit, mindfulness, resilience, and academic burnout have all been thoroughly studied. This study attempts to fill them. First of all, several research have examined these psychological dimensions separately, ignoring their intricate interactions. An insufficient knowledge of the protective and mediating functions of grit and mindfulness is left behind by this fragmented approach, which misses how these factors work together to impact academic burnout. Few researches have explicitly examined the mediating and moderating effects of mindfulness and resilience in the link between grit and academic burnout, despite the fact that these concepts have been studied as burnout mitigators. Though grit, mindfulness, and academic burnout have been the subject of much study, few studies have looked at the role that mindfulness plays in mediating the link between grit and burnout in college students. This study bridges this gap by investigating the ways in which mindfulness-based activities might improve students' well-being, lessen burnout, and increase resilience.

### **METHOD**

This study utilised a mixed-methods research approach to investigate the interconnections between college students' academic burnout, mindfulness, and grit. The quantitative component employed a correlational approach to examine the relationships between these dimensions and the function of mindfulness as a mediator in the link between academic burnout and grit. A mediation study was performed to explore these assumptions and ascertain if mindfulness was a conduit for the impact of grit on burnout. To determine the existence and degree of mediation, the direct and indirect effects' intensity and significance were assessed. In order to examine individual experiences with academic stress, perseverance, emotional control, and perceptions of institutional support, a deliberate subsample of participants was chosen for structured interviews for the qualitative component. Key themes emerged from the thematic analysis of this qualitative data, which enhanced and broadened the understanding of the quantitative results. This integrated methodological approach provided empirical and experiential insights into measures for minimizing student burnout and allowed for a thorough understanding of the relationship between academic burnout, mindfulness, and grit.

#### ***Participants***

The study used purposive sampling to recruit 200 university students between the ages of 18 and 26. To be eligible, individuals had to be enrolled full-time in an educational institution while not working part-time. In order to account for any potential confounding psychological factors, students who had a diagnosed mental disorder were deemed ineligible. Three standardized tools were used in the study: the Mindfulness Attention Awareness Scale

## Examining the Role of Grit and Mindfulness as Protective Mechanisms Against Academic Burnout in University Students: A Mixed-Methods Approach

(MAAS) for mindfulness, the Short Grit Scale for grit, and the Burnout Assessment Tool for student burnout.

### Procedure

There were two stages to the data collection process. Two-hundred college students participated in the quantitative phase by answering online questionnaires that included the standardized grit, mindfulness, and academic burnout measures. Before participation, informed consent was sought. Twenty chosen individuals participated in structured interviews throughout the qualitative phase to find out more about their experiences. For the purpose of thematic analysis, every interview was transcribed. Multiple linear regression was used to assess the predictive power of grit and mindfulness in relation to academic burnout in quantitative data. In order to evaluate the indirect impact of mindfulness on the connection between grit and burnout, mediation was examined using a four-step regression analysis and validated using the Sobel test. A purposive subsample was used in structured interviews for the qualitative component. Thematic analysis was used to examine the data in order to find recurrent themes that put the quantitative findings in perspective.

## RESULTS

The distributional characteristics of the three main variables—burnout, grit, and mindfulness were investigated using descriptive statistics.

*Table 1. Descriptive statistics for variables (N=200)*

Variable	Mean (M)	SD	Skewness	Kurtosis	Shapiro-Wilk (p)
Burnout	3.11	0.73	-0.05	-0.59	0.072
Grit	3.17	0.61	-0.44	-0.19	0.088
Mindfulness	3.38	0.96	-0.62	-0.13	0.063

Burnout, grit, and mindfulness were evaluated in relation to each other using Pearson correlation coefficients. Both grit ( $r = -0.398$ ,  $p < .001$ ) and mindfulness ( $r = -0.467$ ,  $p < .001$ ) were substantially and negatively connected with burnout suggesting that lower levels of academic burnout are linked to higher levels of grit and mindfulness. Additionally, there was a substantial positive association between mindfulness and grit ( $r = 0.462$ ,  $p < .001$ ), indicating a psychological connection between the two preventative qualities.

The predicted relationship between grit and mindfulness and academic burnout was investigated using a multiple regression analysis. The assumptions of independence, homoscedasticity, normality, and linearity were evaluated and satisfied. According to the statistical significance of the entire model ( $F(2, 197) = 36.19$ ,  $p < .001$ ), the independent variables accurately predicted burnout levels.  $R^2 = .268$  indicates that the model explained around 26.8% of the variation in burnout ratings.

*Table 2. Multiple regression predicting academic burnout*

Predictor	B	SE	$\beta$	t	p
Grit	-0.274	0.068	-0.331	-4.04	< .001
Mindfulness	-0.353	0.061	-0.392	-5.79	< .001

A number of hierarchical regression analyses were conducted using the traditional procedures described by Baron and Kenny in order to examine if mindfulness mediates the

**Examining the Role of Grit and Mindfulness as Protective Mechanisms Against Academic Burnout in University Students: A Mixed-Methods Approach**

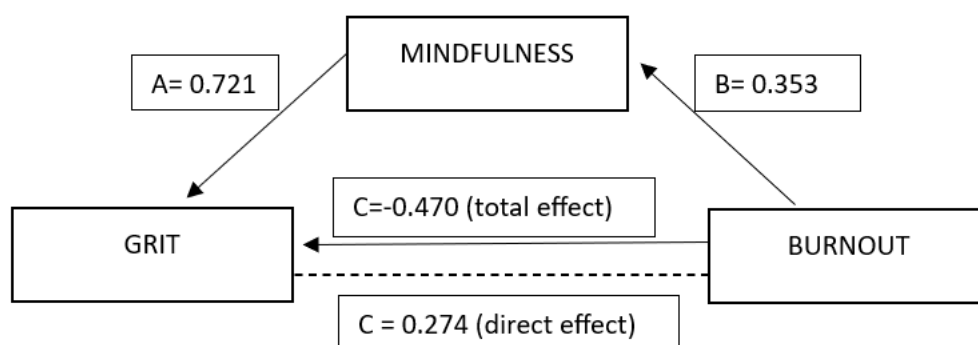
connection between grit and academic burnout. In the initial regression model, academic burnout was significantly predicted negatively by grit ( $B = -0.415$ ,  $SE = 0.065$ ,  $\beta = -0.502$ ,  $p < .001$ ), as Table 3 illustrates. Grit was shown to be a significant predictor of mindfulness in the second phase ( $B = 0.398$ ,  $SE = 0.059$ ,  $\beta = 0.491$ ,  $p < .001$ ), indicating a connection between grit and the suggested mediator. Ultimately, in the third model, which included both grit and mindfulness as predictors of burnout, grit's predictive strength decreased but remained significant ( $B = -0.274$ ,  $SE = 0.068$ ,  $\beta = -0.331$ ,  $p < .001$ ), while mindfulness continued to be a significant negative predictor ( $B = -0.353$ ,  $SE = 0.061$ ,  $\beta = -0.392$ ,  $p < .001$ ).

**Table 3. Regression models for mediation analysis**

Step	Outcome Variable	Predictor	B	SE	$\beta$	t	p
1	Burnout	Grit	-0.415	0.065	-0.502	-6.38	< .001
2	Mindfulness	Grit	0.398	0.059	0.491	6.75	< .001
3	Burnout	Grit	-0.274	0.068	-0.331	-4.04	< .001
	Mindfulness		-0.353	0.061	-0.392	-5.79	< .001

As shown in Table 3, these findings suggest that mindfulness modulates the association between academic burnout and grit to some extent. To calculate the indirect relationship between grit and academic burnout through mindfulness, the standardized beta coefficients of the two relevant pathways—grit to mindfulness ( $\beta = 0.491$ ) and mindfulness to academic burnout ( $\beta = -0.392$ )—were multiplied. This produced a normalized indirect impact of  $\beta = -0.192$ , indicating that grit's positive correlation with mindfulness reduces academic fatigue significantly. A partial mediation hypothesis, in which mindfulness partially transfers the impact of grit on academic burnout, is empirically supported by the data, as both indirect channels were statistically significant.

**Figure 1. Model of Mindfulness-Based Mediation of the Association of Grit and Academic Burnout**



The mediation model that was examined in this study is shown graphically in Figure 1. The graphic shows how grit affects academic burnout both directly and indirectly, with mindfulness serving as a mediating factor. Each route displays the standardized regression coefficients. Greater mindfulness is linked to higher grit levels, according to the positive route linking grit to mindfulness ( $\beta = 0.491$ ). Conversely, heightened mindfulness is a strong predictor of reduced burnout ( $\beta = -0.392$ ). There is nevertheless a strong direct relationship between grit and burnout ( $\beta = -0.331$ ), which suggests partial mediation. With a calculated standardized indirect impact of  $-0.192$ , mindfulness was found to have a significant mediating role in the link between grit and burnout.

**Examining the Role of Grit and Mindfulness as Protective Mechanisms Against Academic Burnout  
in University Students: A Mixed-Methods Approach**

***Thematic Analysis***

Thematic analysis was conducted to investigate students' experiences with grit, mindfulness and academic fatigue in order to support the quantitative findings. Five major themes emerged from the qualitative data, providing insight into how mindfulness and grit affect academic burnout in actual academic environments.

**Table 4. Themes on grit, mindfulness and Burnout**

<b>Themes</b>	<b>Description</b>	<b>Illustrative quotes</b>
<b>Dual Role of Grit in persistence and exhaustion</b>	Grit renders perseverance feasible, but when students push past their emotional boundaries without apprehension it may contribute to burnout.	<i>"I kept thinking I should be able to handle it, even when I was emotionally exhausted." "I have a voice in my head that assures me that I must continue." "Because I believed I was being weak, I was unable to recognize it as burnout."</i>
<b>Mindfulness as an emotional regulation tool</b>	Students who adopt mindfulness are better able to control their emotions and think clearly, which helps them deal with stress, refocus, and stay grounded in the face of academic pressures.	<i>"Being mindful caused me to pause and take a deep breath." Instead of responding, it allowed me time to think things out. "I quit spiralling so much after I started practicing mindfulness." "I am less anxious and more focused after I meditate, even if it is just ten minutes."</i>
<b>Academic pressure undermining resilience</b>	Excessive demands on students' academic performance lower their intrinsic drive and jeopardize their ability to remain resilient and aware.	<i>"I lost sight of the reason behind any of it. I simply continued pounding in vain." "The system assumes we can handle everything on our own without assistance." "I force myself to keep going even though I don't feel motivated sometimes because I'm afraid of failing."</i>
<b>Institutional neglect and burnout</b>	Emotional detachment and feelings of invisibility are exacerbated by a lack of institutional knowledge of and responsiveness to student burnout.	<i>"The system doesn't have room for the statement, 'I'm not okay.'" "I felt that the college only gave a damn about grades." "Who do you have to tell that to, even though it was obvious I was burning out?"</i>
<b>Peer support as a protective factor</b>	Peer relationships offer informal coping mechanisms, emotional support, and validation for academic stress.	<i>"Talking makes things more bearable, even if we don't find a solution." "Because they understand it, peers can sometimes be more helpful than the university." "A friend who had also experienced mindfulness taught me about it."</i>

## Examining the Role of Grit and Mindfulness as Protective Mechanisms Against Academic Burnout in University Students: A Mixed-Methods Approach

Consistent trends in students' experiences and relationships with grit, mindfulness and academic burnout were revealed by combining qualitative and quantitative data. Grit and mindfulness were shown to be favourably correlated ( $\beta = 0.491$ ) and negatively correlated ( $\beta = -0.392$ ) with academic burnout, respectively, according to the quantitative analysis. A noteworthy indirect impact ( $\beta = -0.192$ ) verified that mindfulness acted as a partial mediator in the connection between academic fatigue and grit.

### DISCUSSION

The purpose of this study was to investigate the connections between academic burnout, grit, and mindfulness by combining qualitative theme analysis and quantitative modelling to provide an improved comprehension of how these concepts function within college students' real-world experiences.

Grit strongly predicted increased mindfulness ( $R^2 = 0.213$ ,  $p < .001$ ), according to quantitative data, confirming the idea that persistence and continuous attention might improve present-moment awareness. Furthermore, grit independently predicted decreased burnout ( $R^2 = 0.159$ ,  $p < .001$ ) and mindfulness substantially predicted lower burnout ( $R^2 = 0.218$ ,  $p < .001$ ). Crucially, it was shown that mindfulness mediated 54.15% of the total impact, partially mediating the association between grit and burnout. This suggests that grit's protective function also involves fostering awareness. Crucially, mindfulness was shown to be a somewhat better predictor than grit, suggesting that it may have a more immediate and direct regulating role in demanding academic settings.

According to the first stage, grit explained 21.3% of the variation in mindfulness and was a positive predictor of mindfulness ( $B = 0.398$ ,  $\beta = 0.491$ ,  $p < .001$ ). This suggests that mindful awareness is more likely to be practiced or shown by students with higher grit, maybe as a result of their increased capacity for discomfort and effort (Cheung et al., 2021; Mongkolrat, 2019). According to the second stage, mindfulness explained 21.8% of the variation and was a significant predictor of decreased burnout ( $B = -0.353$ ,  $\beta = -0.392$ ,  $p .001$ ). The direct relationship between grit and burnout dropped from  $-0.415$  to  $-0.274$  when both were included in the final model suggesting a partial mediation. A substantial amount of grit's protective effect is mediated by its beneficial effect on mindfulness, as demonstrated by the Sobel test ( $Z = -5.22$ ,  $p < .001$ ) and the computed indirect effect. From a conceptual standpoint, this illustrates a two-step psychological method: grit encourages persistent academic engagement and distress tolerance, which in turn supports the development of mindful awareness, a cognitive-emotional tool that directly reduces stress and burnout. The direct relationship between grit and burnout was diminished but still significant. The results add to the mounting evidence that these constructs are not independent but rather interdependent, and that interventions that try to lessen academic burnout might be more effective if they focus on both mindfulness (through emotional awareness and attention controls) and grit (through a growth mindset and perseverance-building techniques). The practical implementation of these psychological resources, however, is heavily reliant on institutional support, social environment, and personal compatibility, as the qualitative themes subsequently demonstrate.

But beyond these statistical correlations, the qualitative study (Table 4) revealed intricate dynamics. Theme 1: Dual Role of Grit in Persistence and tiredness, for instance, showed that although grit made tasks easier to complete, it frequently came at the expense of emotional tiredness. Grit may cause burnout symptoms to go unnoticed, as seen by the several

## Examining the Role of Grit and Mindfulness as Protective Mechanisms Against Academic Burnout in University Students: A Mixed-Methods Approach

participants' accounts of enduring stress without getting enough sleep. The results of the mediation were further enhanced by Theme 2: Mindfulness as an Emotional Regulation Tool. Although the regression model indicated that mindfulness greatly decreased burnout, the qualitative data revealed that individuals' access to it differed.

The connection between internal characteristics and burnout was made even more complex by the third theme, Academic Pressure Undermining Resilience. Despite having a lot of grit or practicing mindfulness occasionally, individuals said that persistent academic overload was a factor that made them less resilient. The sensations that students expressed—frustration, shame, and powerlessness under relentless academic demands—were important for contextual interpretation but were not adequately represented by statistical predictors. An important weakness in official support networks was also highlighted in Theme 4: Institutional Neglect and Burnout. Despite the quantitative findings indicating the importance of human qualities like grit and mindfulness, individuals often characterized their institutions as uninformed about the reality of burnout or uninterested. However, Theme 5, Peer Support as a Protective Factor included information on other resilience-boosting factors. Peer networks frequently replaced the lack of institutional resources, providing many members with both practical and emotional support. Despite not being included in the quantitative model, this interpersonal feature was prominent in narrative accounts, demonstrating the importance of social environment as a mediator of academic wellness. These results collectively imply that although mindfulness and grit statistically predict less burnout, their effects are considerably mitigated by emotional and contextual reality.

### CONCLUSION

A mixed-methods approach was used in this study to provide a thorough analysis of the connection between academic burnout, mindfulness, and grit. This allowed for both deep contextual awareness and statistical rigor. The results taken together imply that although mindfulness and grit are valuable preventative measures against burnout, their effectiveness is greatly influenced by the context in which they are used. Findings from quantitative research showed that mindfulness somewhat moderated the association between grit and burnout, and that both traits independently predicted reduced levels of burnout. Qualitative data provided further detail and refinement to these statistical relationships, demonstrating how students see these categories as intricate, context-dependent tactics ingrained in their educational, emotional, and social surroundings rather than merely as intrinsic characteristics.

Among the study's key findings is the necessity of redefining grit as a potentially exhausting resource when used without emotional control or institutional support, rather than as a stand-alone virtue. Instead, then seeing their perseverance as a choice, participants frequently indicated that they were forced to labour through obvious symptoms of mental or physical tiredness. Perseverance helped people finish tasks, but it often caused problems for their wellbeing, especially when it wasn't combined with activities that promoted emotional self-awareness. Given this, mindfulness's mediating function assumes a particularly important role. In addition to improving students' emotional regulation skills, mindfulness also lessened the psychological stress brought on by high grit levels, allowing for a more long-lasting kind of involvement. These discoveries have ramifications across other fields. Grit-building programs in schools should be supplemented by organized assistance with emotional control, especially through mindfulness-based techniques. It is not possible to

## **Examining the Role of Grit and Mindfulness as Protective Mechanisms Against Academic Burnout in University Students: A Mixed-Methods Approach**

regard mindfulness as a panacea. Significant disparities in students' comprehension, availability, and use of mindfulness practices were found by the study. Some people saw instant comfort and clarity from mindfulness, while others found it puzzling or even upsetting, especially those who had no prior exposure or direction. This implies that in order to guarantee fair access and effect, interventions need to be customized, scaffolded, and culturally sensitive. This study emphasizes the vital role that institutional accountability plays in determining students' well-being, even at the individual level. Participants expressed a common belief that the school does not care about burnout and that mental health services are frequently only offered as elective courses rather than being incorporated into the curriculum. Many kids looked to peer networks for approval, emotional support, and cooperative coping when there were no official systems of care in place. These results demand that colleges reconsider their conceptions of and approaches to student mental health. Institutions should foster academic climates that mainstream emotional discourse, encourage mental health, and integrate wellness into pedagogy and policies rather than framing resilience as a personal responsibility on students.

Further philosophical and ethical questions about how contemporary educational institutions define and reward success are also raised by the findings. Institutions run the danger of creating cultures where students repress their emotional demands and accept fatigue as a normal part of the academic process when they subtly encourage overwork and value constant output under the pretence of resilience. Institutions may be training graduates for long-term stress rather than long-term success if they don't promote emotional literacy and coping skills in addition to academic production. In combination, the results point to the need for a more complex conceptual framework that takes into consideration how motivational characteristics and regulatory mechanisms interact. This research supports a recursive paradigm in which mindfulness is reshaped by persistence, and perseverance is reshaped by mindfulness, rather than seeing grit and mindfulness as cumulative or linear factors. While mindfulness without consistent work may find it difficult to convert into long-term success, grit without mindfulness runs the danger of being inflexible and self-punitive. Working across disciplines will also be necessary to address academic fatigue comprehensively. Psychologists cannot change educational cultures on their own. Working together, educators, curriculum designers, university administrators, and legislators must rethink learning settings to promote emotional vibrancy in addition to cognitive success.

### ***Limitations and Future research***

Although this study offers valuable insights, it is crucial to recognize its limits. Using self-report tools may add bias linked to social desirability or self-perception, and the cross-sectional design makes it impossible to draw firm conclusions regarding causality. Additionally, the sample was selected from a specific educational and cultural setting, which would restrict how broadly the results can be applied in different academic settings. Additionally, the qualitative data showed variation in the conceptualization of mindfulness, indicating the need for future study to employ culturally sensitive tools and more accurate definitions. In the future, research that looks at the relationship between grit and mindfulness across time and in different academic contexts will need to be experimental and longitudinal. Future research should investigate the impact of contextual factors such as access to institutional resources, gender identity, and academic field. Researching how faculty attitudes and teaching methods influence students' experiences with pressure and perseverance might also be beneficial. Developing inclusive and successful solutions to support educational and emotional well-being requires addressing these gaps. The study's

## Examining the Role of Grit and Mindfulness as Protective Mechanisms Against Academic Burnout in University Students: A Mixed-Methods Approach

findings ultimately contribute to our knowledge that resilience and mindfulness are dynamic processes that are impacted by social interactions, personal strengths, and structural factors rather than being fixed attributes.

### REFERENCES

- Aguerre, N., Etchevers, M. J., & Richaud, M. C. (2021). Electrophysiological prints of grit. *Frontiers in Psychology, 12*, 730172.
- Bazelais, P., Lemay, D. J., & Doleck, T. (2016). How does grit impact college students' academic achievement in science? *European Journal of Science and Mathematics Education, 4*(1), 33–43.
- Brennan, B. M., Ketcham, C. J., Patel, K., & Hall, E. E. (2018). Academic confidence and grit predict mindfulness in collegiate student-athletes. *Journal of Educational Psychology*.
- Calo, M., Judd, B., & Peiris, C. (2024). Grit, resilience, and growth-mindset interventions in health professional students: A systematic review and meta-analysis. *Journal of Medical Education*.
- Cao, S., Geok, S. K., Roslan, S., Qian, S., Sun, H., Lam, S. K., & Liu, J. (2022). Mindfulness-based interventions for the recovery of mental fatigue: A systematic review. *International Journal of Environmental Research and Public Health, 19*(13), 7825.
- Cheung, R. Y. M., & Lau, E. Y. Y. (2021). Mindfulness and grit: Self-compassion as a mediator among meditators in the United Kingdom. *Personality and Individual Differences, 171*, Article 110456.
- Cheung, R. Y., & Djekou, L. (2024). Self-compassion and grit mediated the relation between mindfulness and mind wandering. *Journal of College Student Retention: Research, Theory & Practice*.
- Cheung, S. P., Tu, B., & Huang, C. (2022). Adverse childhood experiences, mindfulness, and grit in college students in China. *Journal of Educational Psychology*
- Cornelissen, N. B. (2022). Grit, sense of belonging, and mindfulness as predictors of adjustment and persistence at university. *Journal of Higher Education*.
- D'Souza, S. E. (2018). THRIVE study: Effects of resilience and grit on mental health outcomes in college students (Undergraduate honors thesis). Pennsylvania State University.
- Datu, J. A. D., & Restubog, S. L. D. (2022). Antecedents and consequences of grit among working adults: A transpersonal psychology perspective. *Frontiers in Psychology, 13*, 896231.
- Datu, J. A. D., Valdez, J. P. M., & Restubog, S. L. D. (2021). Beyond passion and perseverance: Review and future research initiatives on the science of grit. *Frontiers in Psychology, 11*, 545526.
- Datu, J. A. D., Yang, W., & Lau, K. W. (2023). Does mindfulness matter for cognitive reappraisal and academic engagement? A cross-lagged panel model study in Filipino high school students. *Journal of Early Adolescence*.
- Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology, 92*(6), 1087–1101.
- Filipe, M. (2024). The impact of mindfulness on cognitive development and academic performance among children and adolescents. In *Mindfulness for Child and Adolescent Well-Being: International Perspectives* (pp. 48–61). Taylor & Francis

## Examining the Role of Grit and Mindfulness as Protective Mechanisms Against Academic Burnout in University Students: A Mixed-Methods Approach

- Gan, R., Xue, J., & Chen, S. (2023). Mindfulness-based interventions and burnout in Chinese college students. *Journal of Educational Psychology*.
- Jumaat, S., Hassan, R., & Othman, M. (2020). Grit as a predictor of academic burnout among medical students. *Journal of Medical Education and Curricular Development*, 7, 1–9.
- Liu, Z., Xie, Y., Sun, Z., Liu, D., Yin, H., & Shi, L. (2023). Factors associated with academic burnout and its prevalence among university students: A cross-sectional study. *BMC Medical Education*, 23(1), 317.
- Macapagal, P. M. L., & Sangines, M. T. (2021). Mediating effects of mindfulness between grit and study habits during COVID-19. *Journal of Educational Psychology*.
- Madigan, D. J., Stoeber, J., & Passfield, L. (2024). The relationship between burnout, motivation, and academic performance. *Journal of Educational Psychology*.
- March-Amengual, J. M., Cambra Badii, I., Casas-Baroy, J. C., Altarriba, C., Comella Company, A., Pujol-Farriols, R., Baños, J. E., Galbany-Estragués, P., & Comella Cayuela, A. (2022). Psychological distress, burnout, and academic performance in first-year college students. *International Journal of Environmental Research and Public Health*, 19(6), 3356
- Miles, A. (2024). The role of grit in preventing burnout among school psychologists. *Journal of Educational Psychology*.
- Mongkolrat, R. (2019). The relationship between mindfulness and grit: A cross-cultural study of university students in New Zealand, Thailand, and the United States (Master's thesis, University of Canterbury). University of Canterbury Research Repository.
- Napora, L. (2013). The impact of classroom-based meditation practice on cognitive engagement, mindfulness and academic performance of undergraduate college students (Doctoral dissertation). State University of New York at Buffalo.
- Pham Thi, T. D., & Duong, N. T. (2024). Investigating learning burnout and academic performance among management students: A longitudinal study in English courses. *BMC Psychology*, 12(1), 219.
- Rahmatpour, P., Chehrzad, M., Ghanbari, A., & Sadat-Ebrahimi, S. R. (2019). Academic burnout as an educational complication and promotion barrier among undergraduate students: A cross-sectional study. *Journal of Education and Health Promotion*, 8, 201.
- Rahmatpour, P., Chehrzad, M., Ghanbari, A., & Sadat-Ebrahimi, S. R. (2022). How physical exercise impacts academic burnout in college students: The mediating effects of self-efficacy and resilience. *Frontiers in Psychology*, 13.
- Sari, D. P., & Pratiwi, N. L. P. E. (2020). The relationship between mindfulness and grit in final year students. *Jurnal Psikologi Ulayat: Indonesian Journal of Indigenous Psychology*, 7(2), 163–178.
- Schussler, D. L., Jennings, P. A., Sharp, J. E., & Frank, J. L. (2016). Cognitive effects of mindfulness training: Results of a pilot study based on a theory-driven approach. *Frontiers in Psychology*, 7, 1037.
- Teuber, Z., Nussbeck, F. W., & Wild, E. (2021). Grit in burnout-prevention: Exploring grit in the demands-resources model. *Journal of Educational Psychology*.
- Vainio, M. M., & Daukantaite, D. (2015). Grit and different aspects of well-being: Direct and indirect relationships via sense of coherence and authenticity. *Journal of Happiness Studies*, 17, 2119–2147

## Examining the Role of Grit and Mindfulness as Protective Mechanisms Against Academic Burnout in University Students: A Mixed-Methods Approach

- Xu, Y., Chen, X., & Li, F. (2017). Mindfulness and academic burnout among college students: The mediating role of self-compassion. *Journal of College Student Retention: Research, Theory & Practice*, 19(2), 147–162.
- Zhang, Y., & Li, F. (2020). The effect of mindfulness on academic burnout among university students: A systematic review. *Journal of Educational Psychology*, 112(5), 761–771

### **Acknowledgment**

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

### **Conflict of Interest**

The author(s) declared no conflict of interest.

**How to cite this article:** Jalla, R. & Hussain, M.I. (2025). Examining the Role of Grit and Mindfulness as Protective Mechanisms Against Academic Burnout in University Students: A Mixed-Methods Approach. *International Journal of Indian Psychology*, 13(4), 119-133. DIP:18.01.013.20251304, DOI:10.25215/1304.013