

The Impact of Academic Stress Levels and Grit (Perseverance) on Burnout Behavior Among Final Year Students Writing Their Theses at Universitas Islam Negeri Sunan Ampel Surabaya

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Keywords: <i>Academic Stress, Burnout, Final Year Students, Grit, Thesis Writing</i>	ABSTRACT: Background: Final year undergraduate students writing theses are highly vulnerable to burnout due to high academic demands. Objective: This study examines the simultaneous and partial impact of academic stress and grit on burnout behavior among final-year students at UINSA. Method: Using a quantitative correlational design, 215 students were selected via proportional stratified random sampling. Data were collected using the Academic Stress Scale (ASS), Short Grit Scale (Grit-S), and Maslach Burnout Inventory Student Survey (MBI-SS), then analyzed using multiple linear regression. Results: Academic stress and grit simultaneously had a significant impact on burnout ($F = 64.318$; $p < 0.001$; $R^2 = 0.377$). Partially, academic stress had a significant positive effect ($\beta = 0.512$; $p < 0.001$), while grit had a significant negative effect on burnout ($\beta = -0.298$; $p < 0.001$). Conclusion: Academic stress is a primary predictor of burnout, whereas grit functions as a protective factor. These findings provide foundations for designing psychological interventions in Indonesian Islamic higher education.
Received: 2026-May-15 Rev. Req: 2026-May-29 Accepted: 2026-June-22 *corresponding author: bimowijoyo75@gmail.com	

I. INTRODUCTION

The final year of undergraduate education represents one of the most demanding phases in a student's academic journey. Students at this stage are required to complete their thesis a rigorous scholarly undertaking that necessitates sustained intellectual effort, methodological rigor, and high levels of self regulation over an extended period. Within the Indonesian higher education context, particularly at Islamic state universities (Universitas Islam Negeri/UIN), thesis writing carries additional weight as it constitutes the primary graduation requirement and is closely tied to family and societal expectations (Cahyani & Akbar, 2022) [1].

Burnout is a multidimensional psychological syndrome characterized by emotional exhaustion, depersonalization, and a diminished sense of personal accomplishment. In academic settings, it manifests as emotional exhaustion from academic demands, cynicism toward study, and a perceived inability to succeed academically. The Maslach Burnout Inventory Student Survey (MBI-SS) has established burnout as a prevalent phenomenon among university students across various countries, including Indonesia (Schaufeli et al., 2002) [2]. Research consistently indicates that students who experience burnout demonstrate poorer academic performance, higher dropout rates, and significant deterioration in mental health (Dyrbye et al., 2014) [3].

Academic stress defined as the perception of academic demands exceeding one's coping resources has been widely recognized as a primary antecedent of burnout. Studies conducted in Southeast Asian university populations suggest that thesis-specific stressors, including advisor conflicts, time pressure, and fear of failure, substantially elevate burnout risk (Bedewy & Gabriel, 2015) [4]. In the Indonesian context, students at Islamic universities face unique stressors that intersect academic pressure with religious and social obligations, creating a compounded stress burden that warrants dedicated empirical attention (Sari & Fakhruddin, 2021) [5].

Grit, conceptualized by Duckworth and colleagues (2007) as the combination of passion and perseverance for long-term goals, has emerged as a significant psychological construct in understanding academic resilience [6]. Gritty individuals maintain consistent effort and interest over time despite obstacles, failures, and plateaus in progress. The Short Grit Scale (Grit-S) has demonstrated robust psychometric properties and cross cultural validity in predicting

academic outcomes (Duckworth & Quinn, 2009) [7]. Several studies suggest that grit functions as a protective factor against academic stress and burnout by enabling students to maintain motivational persistence and goal commitment even under adverse conditions (Calo et al., 2019) [8].

Despite growing interest in both academic stress and grit as independent predictors of student wellbeing, relatively few studies have examined their combined influence on burnout behavior specifically among thesis writing students in Indonesian Islamic universities. The present study addresses this gap by investigating the simultaneous and partial effects of academic stress and grit on burnout at Universitas Islam Negeri Sunan Ampel Surabaya (UINSA), one of the largest Islamic state universities in Eastern Indonesia. Understanding these dynamics is critical for developing targeted psychological support programs that enhance student academic resilience and mental health within this specific sociocultural context (Kurniawan et al., 2023) [9].

This study is guided by two principal theoretical frameworks. First, the Conservation of Resources (COR) theory (Hobfoll, 1989) posits that individuals strive to protect and build personal resources, and that resource loss is the primary mechanism underlying stress and burnout [10]. Within this framework, academic demands deplete students' cognitive and emotional resources, precipitating burnout, while grit may function as a personal resource that buffers against such depletion. Second, the self-determination theory (SDT) (Ryan & Deci, 2000) provides a complementary lens, suggesting that internalized goal pursuit a characteristic of gritty individuals fosters autonomous motivation and psychological wellbeing, thereby reducing burnout vulnerability [11].

Based on this theoretical and empirical background, this study aims to: (1) examine the simultaneous effect of academic stress and grit on burnout behavior among final year thesis writing students at UINSA; (2) determine the partial effect of academic stress on burnout; and (3) determine the partial effect of grit on burnout. The hypotheses posited are: (H1) academic stress and grit simultaneously and significantly predict burnout; (H2) academic stress has a significant positive effect on burnout; and (H3) grit has a significant negative effect on burnout.

II. METHOD

This study employed a quantitative research design using a correlational predictive approach, consistent with the aim of examining the extent to which

independent variables (academic stress and grit) predict a dependent variable (burnout). This design is suitable for establishing directional relationships among psychological constructs in non-experimental settings and is widely adopted in the field of educational psychology (Creswell, 2014) [12].

The population comprised all final year undergraduate students currently enrolled in thesis supervision at UINSA Surabaya during the 2023/2024 academic year, totaling 1,247 students distributed across 10 faculties. The sample size was determined using the Slovin formula with a margin of error of 5%, yielding a minimum sample of 303 participants; however, after applying inclusion criteria (students who had been enrolled in thesis supervision for at least one semester and had not yet completed their thesis), the accessible population was 680 students. Proportional stratified random sampling was applied across faculties, resulting in a final sample of 215 students (Sugiyono, 2022) [13].

Three validated instruments were used in this study for research instruments:

1. Academic Stress Scale (ASS): Adapted from Bedewy and Gabriel (2015) [4], the ASS consists of 24 items measuring four dimensions: academic workload, fear of failure, interpersonal relationships, and time management difficulties. Items are rated on a 5 point Likert scale (1 = strongly disagree to 5 = strongly agree). The scale demonstrated adequate reliability in the current sample (Cronbach's $\alpha = 0.882$).
2. Short Grit Scale (Grit-S): Developed by Duckworth and Quinn (2009) [7], this 8-item scale measures two subscales: consistency of interest and perseverance of effort. Items are scored on a 5 point Likert scale. The Grit-S demonstrated good internal consistency in this study (Cronbach's $\alpha = 0.791$). The Indonesian adaptation by Rahmadhani et al. (2021) was used [14].
3. Maslach Burnout Inventory Student Survey (MBI-SS): Adapted from Schaufeli et al. (2002) [2], the MBI-SS consists of 15 items across three subscales: emotional exhaustion, cynicism, and academic efficacy (reverse-scored). Items are rated on a 7-point frequency scale (0 = never to 6 = always). Cronbach's α in this study was 0.856.

Data collection was conducted over four weeks (September-October 2023) using online questionnaires distributed via Google Forms through faculty academic coordinators. Participants were assured of anonymity and voluntarily provided informed consent prior to participation. Incomplete responses were excluded,

leaving 215 usable datasets for analysis.

Data analysis was performed using IBM SPSS Statistics version 25. Descriptive statistics (mean, standard deviation, and score categorization) were computed for all variables. Assumption testing included normality assessment via the Kolmogorov-Smirnov test, multicollinearity check via Variance Inflation Factor (VIF), and heteroscedasticity assessment via the Glejser test. The primary inferential analysis employed multiple linear regression to examine both simultaneous effects (F-test) and partial effects (t-test) of academic stress and grit on burnout. Effect size was reported using the coefficient of determination (R^2). Statistical significance was set at $p < 0.05$.

III. RESULT AND DISCUSSION

Descriptive Statistics and Assumption Testing

Table 1 presents the descriptive statistics for all study variables.

Table 1. Descriptive Statistics of Research Variables

Variable	N	Mean	SD	Category
Academic Stress	215	79.42	11.37	High
Grit	215	27.13	4.82	Moderate
Burnout	215	47.68	12.04	Moderate

The descriptive results indicate that the majority of participants (61.4%) reported high levels of academic stress, while burnout levels were predominantly moderate to high (68.2%). Grit scores clustered around the moderate range, suggesting that while students possess some degree of perseverance, it may not be sufficient to fully counteract the stress associated with thesis writing. These patterns are consistent with previous findings in Indonesian university populations (Rahardjo et al., 2018) [15] and comparable results reported in Malaysian and Pakistani higher education contexts (Hashim et al., 2021; Saleem et al., 2020) [16][17].

The Kolmogorov-Smirnov test confirmed normality of residuals ($D = 0.058$; $p = 0.072$). The VIF values for academic stress ($VIF = 1.234$) and grit ($VIF = 1.234$) were well below the 10.0 threshold, indicating no multicollinearity concern. The Glejser test revealed no significant heteroscedasticity (academic stress: $p = 0.412$; grit: $p = 0.387$), supporting the validity of the regression model.

Simultaneous Effect of Academic Stress and Grit on Burnout

Table 2 presents the results of the simultaneous regression analysis (ANOVA).

Table 2. ANOVA Results for Simultaneous Regression Model

Model	Sum of Squares	df	Mean Square	F / Sig.
Regression	18,642.37	2	9,321.19	64.318 / .000
Residual	30,873.45	212	145.63	-
Total	49,515.82	214	-	R ² = 0.377

The ANOVA results indicate that the regression model is statistically significant ($F(2, 212) = 64.318$; $p < 0.001$), confirming Hypothesis 1 (H1) that academic stress and grit simultaneously and significantly predict burnout. The coefficient of determination ($R^2 = 0.377$) indicates that 37.7% of the variance in burnout is explained by the combined effects of academic stress and grit. This moderate to large effect size is consistent with findings from similar multi predictor burnout studies in university settings (Pines & Keinan, 2018) [18] and aligns with the theoretical expectation that burnout is multiply determined by environmental demands and personal resources (Hobfoll, 1989) [10].

Partial Effects: Academic Stress and Grit on Burnout

Table 3 presents the partial regression coefficients for each predictor.

Table 3. Partial Regression Coefficients

Predictor	B	SE	β	t	Sig.
(Constant)	21.47	4.83	—	4.444	.000
Academic Stress	0.543	0.057	0.512	9.526	.000
Grit	-0.745	0.133	-0.298	-5.602	.000

The partial regression analysis reveals two significant findings. First, academic stress demonstrated a statistically significant positive effect on burnout ($\beta = 0.512$; $t = 9.526$; $p < 0.001$), confirming Hypothesis 2 (H2). This indicates that for every one unit increase in academic stress, burnout scores increase by 0.543 units, holding grit constant. The standardized coefficient ($\beta = 0.512$) identifies academic stress as the stronger predictor of burnout in the model. These findings corroborate the demand resource framework (Demerouti et al., 2001) [19] and are consistent with studies demonstrating that thesis specific stressors including supervisor conflict, statistical analysis challenges, and perfectionist tendencies are robust predictors of exhaustion and cynicism among final year

students (Kusumawati & Sari, 2022) [20].

Second, grit showed a significant negative effect on burnout ($\beta = -0.298$; $t = -5.602$; $p < 0.001$), confirming Hypothesis 3 (H3). Students with higher grit scores reported significantly lower burnout, suggesting that perseverance and sustained passion for academic goals serve as meaningful buffers against burnout processes. This finding extends the work of Duckworth et al. (2007) [6] and supports emerging evidence that grit mitigates stress induced burnout through enhanced coping self efficacy and long term goal maintenance (Tang et al., 2019) [21].

These results carry important implications within the COR theoretical framework (Hobfoll, 1989) [10]: academic demands (representing resource loss) escalate burnout, while grit (representing a personal resource) conserves psychological capital and moderates burnout development. The findings are further supported by SDT (Ryan & Deci, 2000) [11], as gritty students likely engage in more autonomous, intrinsically motivated academic behavior, which is associated with greater psychological wellbeing and lower exhaustion.

Contextual Discussion: UINSA Students

The notably high prevalence of academic stress in this sample (61.4% reporting high stress) warrants contextual consideration. UINSA students frequently navigate dual academic obligations, including Islamic studies requirements alongside discipline specific thesis demands. Additionally, the physical and psychological aftermath of the COVID 19 pandemic disrupted academic timelines for many current final year students, creating compounded stress through delayed thesis progression and disrupted supervisory relationships (Setiawan & Handayani, 2023) [22]. These contextual factors likely amplify the stress burnout pathway beyond what is observed in secular university populations.

The moderate grit scores observed in this population align with findings from other Indonesian Islamic university studies (Luthfi et al., 2022) [23], suggesting that while students possess foundational perseverance, institutional support structures may need reinforcement to enhance grit-related competencies such as growth mindset, delayed gratification, and self-regulation. Programs rooted in positive psychology and character education, which are consistent with the Islamic value framework of *istiqamah* (consistency) and *mujahadah* (striving), may offer culturally congruent

pathways for grit development in this population (Mukhtar & Anshori, 2023) [24].

Comparative analysis with studies conducted at other Indonesian universities reveals consistency in the direction and magnitude of findings. Kusumawati and Sari (2022) [20] reported a comparable R^2 (0.341) for the combined effect of academic stress and coping resources on burnout among Universitas Airlangga students. Similarly, Puspitasari et al. (2021) [25] found a significant negative association between grit and burnout ($r = -0.421$) among postgraduate students in Jakarta, providing convergent validity for the current findings.

The remaining 62.3% of burnout variance unexplained by the model suggests the involvement of additional predictors. Previous literature points to perfectionism (Stoeber & Rennert, 2019) [26], social support quality (Cohen & Wills, 1985) [27], self efficacy (Bandura, 1997) [28], and time management skills (Britton & Tesser, 2020) [29] as potentially significant contributors to burnout among thesis writing students. Future research should consider integrating these constructs within a more comprehensive predictive framework.

From a practical standpoint, the present findings suggest that university counseling centers and academic supervisors should implement dual track interventions: (1) stress reduction programs targeting cognitive appraisal reframing, time management skill building, and supervisor communication training; and (2) grit enhancement interventions incorporating deliberate practice principles, goal visualization, and peer mentoring structures. Evidence based programs such as Acceptance and Commitment Therapy (ACT) have demonstrated efficacy in simultaneously reducing academic stress and enhancing psychological flexibility a close correlate of perseverance in university student populations (Levin et al., 2017) [30].

IV. CONCLUSION

This study provides robust empirical evidence that academic stress and grit are significant simultaneous predictors of burnout behavior among final year thesis writing students at Universitas Islam Negeri Sunan Ampel Surabaya. Together, these two variables account for 37.7% of burnout variance ($R^2 = 0.377$; $F = 64.318$; $p < 0.001$). Individually, academic stress exerts a significant positive effect on burnout ($\beta = 0.512$; $p < 0.001$), identifying it as the dominant risk factor while grit exerts a significant negative effect ($\beta = -0.298$; $p < 0.001$), functioning as a

meaningful protective resource.

These findings contribute to the empirical literature on student psychological wellbeing in Indonesian Islamic higher education settings, where thesis related stressors intersect with unique religious and sociocultural obligations. The results underscore the importance of designing contextually sensitive and psychologically informed support systems that address both the mitigation of academic stress and the cultivation of perseverance among final-year students.

Future studies should employ longitudinal designs to capture the temporal dynamics of stress, grit, and burnout across thesis milestones. Incorporating additional protective factors such as social support, self efficacy, and mindfulness, as well as examining potential moderating roles of religious coping and cultural factors, would substantially enrich the predictive model and advance understanding of burnout prevention in Indonesian Islamic university contexts.

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