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Achievement Motivation, School Engagement, and Academic Burnout among Distance Learning Undergraduate Students

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Abstract: Distance learning has become a dominant mode of higher education in Indonesia since the pandemic. While it offers flexibility and access, it also increases students' vulnerability to academic burnout due to academic and psychological demands. This study examines the links among achievement motivation, school engagement, and academic burnout among undergraduates at Universitas Terbuka Surabaya. Using a quantitative correlational design and a cross-sectional survey, data were collected from 390 students via self-report questionnaires on burnout, motivation, and engagement. Multiple linear regression in SPSS was used to test the effects of motivation and engagement on burnout. The results indicate that achievement motivation and school engagement are jointly associated with academic burnout ($F = 96.015$, $p < 0.001$), accounting for 33.2% of the variance in burnout. Achievement motivation emerged as a strong and significant negative predictor of academic burnout ($\beta = -0.545$, $p < 0.001$), indicating that students with higher achievement motivation experienced lower levels of burnout. In contrast, school engagement was negatively but non-significantly associated with academic burnout ($\beta = -0.042$, $p = 0.475$). These findings suggest that internal motivational resources play a more critical role than contextual engagement factors in reducing academic burnout among distance learning students. The study highlights the importance of strengthening achievement motivation and self-regulated learning capacities as key strategies for mitigating burnout in higher education delivered through distance learning. The results contribute empirical evidence from an Indonesian Open University context and offer practical implications for institutional policies and student support systems.

Keywords: Academic burnout, Achievement motivation, School engagement, Distance learning, Higher Education.

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1. INTRODUCTION

Distance learning (DL) has undergone rapid, large-scale expansion in higher education systems worldwide, particularly following the COVID-19 pandemic. In Indonesia, this expansion was formalized through the Ministry of Education Circular Letter No. 4/2020, which mandated the nationwide implementation of online learning across all educational levels. Although the Indonesian government officially revoked the COVID-19 pandemic status on 21 June 2023, distance learning remains a dominant and institutionalized mode of delivery in higher education, reflecting both its perceived effectiveness and its strategic value for widening access to education.

As a learning modality, distance learning emphasizes independent study supported by information and communication technologies, enabling flexibility in time, place, and learning pace. This model is particularly relevant in contexts in which students face economic, geographic, or demographic constraints. Universitas Terbuka (UT), established in 1984, represents Indonesia's principal pioneer of open and distance learning, serving large and diverse student

populations who may otherwise have limited access to conventional higher education.

II. LITERATURE REVIEW

One of the most prominent challenges associated with distance learning is the intensification of academic demands placed on students. Online learning environments frequently require higher levels of self-regulation, sustained concentration, and autonomous time management, often in the absence of direct supervision and immediate social support. Empirical studies conducted in post-pandemic contexts demonstrate that abrupt transitions to online learning were accompanied by increased psychological distress, anxiety, and emotional strain among university students [1], [2]. Pandemic-related uncertainty and post-traumatic stress further compounded these pressures, contributing to elevated levels of academic burnout [3], [4].

Academic burnout in higher education is commonly conceptualized as a chronic stress response characterized by emotional exhaustion, cynicism or detachment from academic tasks, and diminished academic efficacy [5], [6]. Empirical evidence indicates that a substantial proportion of distance learning students experience moderate to high levels of burnout,

with some studies reporting prevalence rates of high burnout reaching 46.4% during online learning periods[7], [8].

Several theoretical frameworks have been employed to explain academic burnout among university students. Self-Determination Theory (SDT) emphasizes the role of autonomy, competence, and relatedness in sustaining motivation and psychological well-being [9], [10]. Complementarily, the Job Demands-Resources (JD-R) model conceptualizes burnout as an outcome of excessive academic demands relative to available resources, while the Conservation of Resources (COR) theory highlights resource depletion as a central mechanism underlying burnout in technology-mediated learning contexts[11], [12].

Prior studies also identify achievement motivation as a critical personal resource that reduces burnout by fostering persistence, resilience, and adaptive coping strategies [13], [14]. School engagement, encompassing behavioral, emotional, and cognitive involvement, has also been proposed as a protective factor, although empirical findings in distance-learning contexts remain mixed [15], [16].

III. RATIONALE OF THE STUDY

Despite extensive research on academic burnout, limited empirical evidence examines achievement motivation and school engagement as predictors of burnout within large-scale distance learning systems in developing country contexts. In technology-mediated learning environments such as Universitas Terbuka, students rely heavily on internal motivational resources and self-regulation because of limited face-to-face interaction and institutional monitoring. Inconsistent findings regarding the role of school engagement further underscore the need for context-specific investigation.

Therefore, examining how achievement motivation and school engagement relate, both jointly and independently, to academic burnout is essential for advancing theoretical understanding and informing practical interventions tailored to distance-learning higher education.

IV. RESEARCH QUESTIONS

1. Are achievement motivation and school engagement jointly associated with academic burnout among distance learning undergraduate students?
2. Is achievement motivation negatively associated with academic burnout among distance learning undergraduate students?
3. Is school engagement negatively associated with academic burnout among distance learning undergraduate students?

V. OBJECTIVES OF THE STUDY

- II. To examine the joint association of achievement motivation and school engagement with academic

burnout among distance learning undergraduate students.

- III. To analyze the independent relationship between achievement motivation and academic burnout.
- IV. To analyze the independent relationship between school engagement and academic burnout in the context of distance learning higher education.

VI. HYPOTHESES

Based on the theoretical framework and empirical evidence discussed in the previous sections, the following hypotheses are proposed:

- **H1:** Achievement motivation and school engagement are jointly associated with academic burnout among distance learning undergraduate students.
- **H2:** Achievement motivation is negatively associated with academic burnout among distance learning undergraduate students.
- **H3:** School engagement is negatively associated with academic burnout among distance learning undergraduate students.

VII. METHODOLOGY

Research Design

This study employed a quantitative correlational design to examine the relationships among achievement motivation, school engagement, and academic burnout among university students in distance learning. A cross-sectional survey method was used to capture participants' psychological states and learning-related experiences at a single point in time, which is appropriate for identifying the strength and direction of associations among variables in educational research [16], [17]. The primary objective was to test both the simultaneous and partial effects of achievement motivation and school engagement on academic burnout.

Multiple linear regression was selected as the primary analytical technique because it enables examination of the combined contribution of multiple independent variables to a single dependent variable while also estimating the unique predictive effect of each predictor[2], [18]. All statistical analyses were conducted using IBM SPSS Statistics version 25.

Population and Sample

The study population comprised all active undergraduate (S1) students enrolled in distance-learning programs at Universitas Terbuka Surabaya during the 2022/2023 academic year. The total population size was 24,806 students. Given the relative homogeneity of the population with respect to learning modality and institutional context, a non-probability accidental sampling technique was employed.

Sample size determination followed the guidelines proposed by Krejcie and Morgan (1970) with a 5% margin of error. Based on this reference, the minimum required sample size was 379 respondents. Data collection initially yielded 400 responses; however, 10

responses were excluded due to incomplete or inconsistent data. The final dataset therefore consisted of 390 valid respondents, exceeding the minimum required sample size and ensuring sufficient statistical power for regression analysis.

Research Variables and Instruments

Academic Burnout

Academic burnout was conceptualized as a psychological condition characterized by emotional exhaustion and cynicism arising from excessive academic demands in distance learning environments. Academic burnout was measured using the Indonesian adaptation of the School Burnout Inventory (SBI) developed by Rahman [19], which is based on the original instrument proposed by Salmela-Aro and Näätänen [20].

The adapted SBI consisted of 9 favorable items distributed across two dimensions: emotional exhaustion (5 items) and cynicism (4 items). Responses were measured using a four-point Likert scale. The instrument demonstrated good psychometric properties, with a Cronbach's alpha reliability coefficient of 0.831 and a Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA) of 0.868, indicating that the data were suitable for factor analysis and that the scale possessed adequate internal consistency.

Table 1. Academic Burnout Scale (Likert Scoring)

Response Option	Favorable Score
Strongly Agree (SA)	4
Agree (A)	3
Disagree (D)	2
Strongly Disagree (SD)	1

Table 2. Blueprint of Academic Burnout Questionnaire

Dimension	Item Numbers	Number of Items
Emotional Exhaustion	1, 3, 4, 7, 9	5
Cynicism	2, 5, 6, 8	4
Total	–	9

Achievement Motivation

Achievement motivation was defined as an individual's internal drive to achieve success and meet personal standards of excellence. This variable was measured using a self-developed achievement motivation scale grounded in the grounded theory of achievement motivation, which emphasizes responsibility, persistence, preference for challenge, feedback orientation, realistic goal setting, and risk-taking [21].

The initial version of the scale consisted of 48 items, including both favorable and unfavorable statements. After item analysis and discrimination testing, 6 items were removed, resulting in a final scale of 42 valid items. The instrument demonstrated excellent internal consistency, with a Cronbach's alpha coefficient of 0.944.

Table 3. Achievement Motivation Scale (Likert Scoring)

Response Option	Favorable	Unfavorable
Strongly Agree (SA)	4	1
Agree (A)	3	2
Disagree (D)	2	3
Strongly Disagree (SD)	1	4

Table 4. Blueprint of Achievement Motivation Questionnaire

Aspect	Favorable Items	Unfavorable Items	Total Items
Responsibility & Persistence	6, 10, 13, 19, 20, 27, 39	1, 8, 16, 21, 40, 42, 44	14
Preference for Challenge	3, 4, 5, 11, 36	9, 23, 30, 37, 45	10
Feedback Orientation	15, 26, 32, 47	17, 29, 41, 43, 46, 48	10
Realistic Goals	7, 12, 14	18, 28, 35	6
Risk Taking	2, 24, 31, 33	22, 25, 34, 38	8
Total	23	25	48

Table 5. Item Discrimination Results of Achievement Motivation Scale

Initial Items	Analysis Round	Dropped Items	Remaining Items	Item-Total Correlation Range
48	Round I	2, 26, 27, 32, 37, 38	42	-0.102 – 0.747
42	Round II	–	42	0.31 – 0.752

School Engagement

School engagement was defined as students' behavioral, emotional, cognitive, and performance-related involvement in learning activities. School engagement was measured using the Indonesian version of the Online Student Engagement Scale (OSE), validated by Rahmania [22], originally developed by Dixson [23].

The OSE consisted of 19 favorable items encompassing four dimensions: skills engagement, emotional engagement, participation/interaction, and performance engagement. Responses were recorded on a four-point Likert scale. The instrument demonstrated high reliability, with a Cronbach's alpha coefficient of 0.936. Confirmatory factor analysis indicated satisfactory construct validity, with factor loadings ranging from 0.453 to 0.949.

Table 6. School Engagement Scale (Likert Scoring)

Response Option	Score
Strongly Agree (SA)	4
Agree (A)	3
Disagree (D)	2
Strongly Disagree (SD)	1

Table 7. Blueprint of School Engagement Questionnaire

Dimension	Item Numbers	Number of Items
Skills Engagement	1, 5, 9, 12, 15, 18	6
Emotional Engagement	2, 6, 10, 13, 16	5
Participation/Interaction	3, 7, 11, 14, 17, 19	6
Performance Engagement	4, 8	2
Total	—	19

Data Collection Procedure

Data were collected using an online questionnaire administered via Google Forms. Participation was voluntary, and respondents were required to meet the inclusion criterion of being active undergraduate distance-learning students at Universitas Terbuka Surabaya. To ensure data quality, responses that were incomplete or contained inconsistencies were excluded from the analysis. Of the 400 questionnaires returned, 10 were excluded, yielding a final dataset of 390 valid responses.

Data Analysis Techniques

Prior to hypothesis testing, classical assumption tests were conducted to assess the suitability of the data for multiple linear regression. Normality was assessed using the Kolmogorov-Smirnov test, yielding a p-value of 0.135, indicating that the residuals were normally distributed. Linearity tests indicated linear relationships between achievement motivation and academic burnout ($p = 0.388$) and between school engagement and academic burnout ($p = 0.474$).

Multicollinearity diagnostics showed tolerance values of 0.493 and variance inflation factor (VIF) values of 2.029 for both independent variables, indicating the absence of multicollinearity. Autocorrelation was examined using the Durbin-Watson statistic, which yielded a value of 1.938, suggesting no autocorrelation. Heteroscedasticity was tested using the Glejser method, with non-significant results for achievement motivation ($p = 0.663$) and school engagement ($p = 0.907$), confirming homoscedasticity.

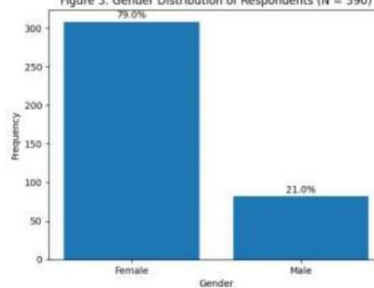
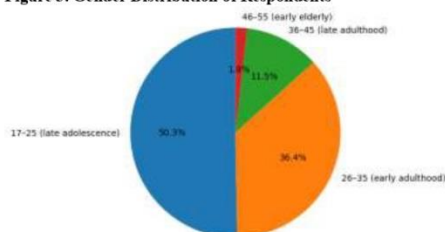
Following these assumption tests, multiple linear regression analysis was performed to examine the simultaneous and partial effects of achievement motivation and school engagement on academic burnout.

VIII. RESULTS**Description of Research Subjects**

This study aimed to examine the relationships among achievement motivation, school engagement, and academic burnout among undergraduate distance-learning students at Universitas Terbuka Surabaya. Overall, the findings provide empirical support for the proposed model, demonstrating that achievement

motivation and school engagement jointly account for a significant proportion of the variance in academic burnout. However, the magnitude and significance of each predictor differ, offering important theoretical and practical implications for understanding burnout in distance learning contexts.

Data were collected from undergraduate distance-learning students at Universitas Terbuka Surabaya. A total of 400 questionnaire responses were initially obtained through the online survey. After data screening, 10 responses were excluded due to incomplete entries or invalid response patterns. Consequently, the final valid sample comprised 390 respondents. The respondents' ages ranged from 17 to 55 years, reflecting a heterogeneous profile of adult learners commonly observed in open and distance learning systems.

Figure 3. Gender Distribution of Respondents (N = 390)**Figure 3. Gender Distribution of Respondents****Figure 4. Age Group Composition of Respondents (Age classification based on the Indonesian Ministry of Health (2009)).****Comparison of Mean Scores by Demographic Categories**

To provide additional descriptive insight, mean comparisons were presented across key demographic categories. This descriptive approach is commonly employed in educational research to contextualize outcome patterns and guide targeted interventions [4], [24].

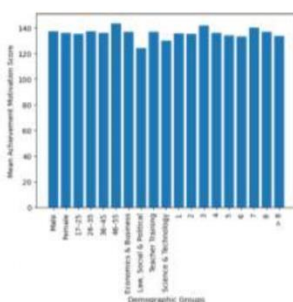


Figure 4. Mean Comparison of School Engagement by Demographic Categories

Categorization of Variable Scores

To interpret the distribution of scores more substantively, each variable was categorized into five levels: very low, low, moderate, high, and very high. The categorization followed normative references based on the mean (μ) and standard deviation (σ), as widely recommended in psychological measurement literature [25].

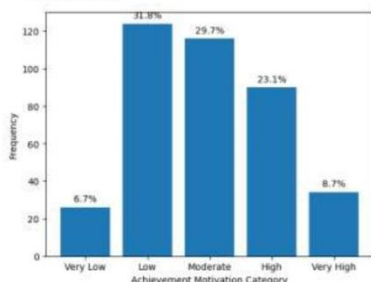


Figure 5. Distribution of achievement motivation score categories among distance learning students (N = 390).

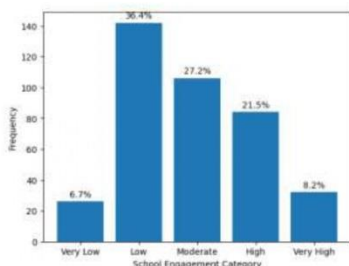


Figure 5. Distribution of school engagement score categories among distance learning students (N = 390).

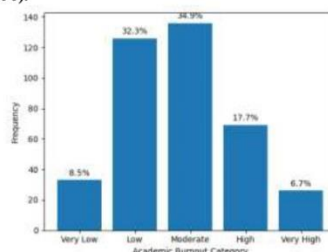


Figure 6. Distribution of academic burnout score categories among distance learning students (N = 390).

Overall, the distributions indicate that the majority of participants fell within the low-to-moderate ranges of achievement motivation and school engagement, while academic burnout was predominantly categorized as moderate. Similar patterns have been reported in studies indicating that students in online learning frequently experience persistent moderate-level strain, influenced by workload, self-regulation demands, and technology-related stressors [5], [8].

Hypothesis Testing Results

Hypotheses were tested using multiple linear regression analysis. The model examined the joint and independent contributions of achievement motivation and school engagement to academic burnout. Prior empirical research suggests that these variables can jointly explain meaningful variance in burnout outcomes, particularly in distance learning settings where self-regulated learning and motivational resources are central [17], [26]. The regression model demonstrated a statistically significant simultaneous effect of achievement motivation and school engagement on academic burnout. As shown in Table 25, the F-test produced an F-value of 96.015 with $p < 0.001$.

To evaluate the independent predictive contribution of each predictor, t-tests were used to assess the regression coefficients. Table 26 indicates that achievement motivation had a significant negative effect on academic burnout ($\beta = -0.545$; $t = -9.206$; $p < 0.001$). In contrast, school engagement demonstrated a negative but non-significant effect on burnout ($\beta = -0.042$; $t = -0.716$; $p = 0.475$).

The coefficient of determination indicates the proportion of variance in academic burnout explained by the predictors. As shown in Table 27, the model yielded $R = 0.576$ with $R^2 = 0.332$ and adjusted $R^2 = 0.328$, indicating that 33.2% of variance in academic burnout was explained by achievement motivation and school engagement, while 66.8% was attributable to

other unmeasured factors. Taken together, these results confirm a statistically significant joint relationship between achievement motivation and school engagement with academic burnout, and indicate that achievement motivation is the dominant independent predictor of academic burnout in this distance-learning student sample. These findings align with prior evidence that motivational resources and engagement factors jointly influence burnout outcomes, although the magnitude of each independent effect may vary depending on contextual and institutional conditions in online learning environments [27], [28].

The results of the multiple regression analysis indicate that achievement motivation and school engagement are significantly associated with academic burnout, as evidenced by a significant F-test ($F = 96.015$; $p < 0.001$). The coefficient of determination ($R^2 = 0.332$) indicates that 33.2% of the variance in academic burnout is explained by the two predictors, with the remaining 66.8% attributable to other factors not examined in this study. This level of explained variance is consistent with prior research indicating that burnout is a multifactorial phenomenon influenced by personal, contextual, and environmental variables in online and distance learning settings [29].

Among the two predictors, achievement motivation emerged as the dominant predictor of academic burnout [30]. The negative and statistically significant regression coefficient ($\beta = -0.545$; $t = -9.206$; $p < 0.001$) indicates that students with higher levels of achievement motivation experience substantially lower levels of academic burnout. This finding supports the view that achievement motivation functions as a critical personal resource that enables students to persist in the face of academic challenges, regulate their learning behaviors, and interpret demanding academic tasks as meaningful rather than overwhelming [31], [32]. In distance learning environments, where students are required to manage their studies independently with limited external monitoring, such internal motivational resources become particularly salient.

The strong role of achievement motivation aligns closely with Self-Determination Theory, which emphasizes intrinsic motivation and the satisfaction of psychological needs in maintaining well-being and preventing emotional exhaustion. Students who are highly motivated are more likely to perceive autonomy in managing their learning, develop a sense of competence through goal attainment, and maintain commitment to their academic objectives despite structural constraints inherent in distance learning. Consistent with prior studies, motivated students tend to adopt adaptive coping strategies, demonstrate resilience under pressure, and show lower susceptibility to cynicism and disengagement, all of which reduce the likelihood of burnout [33].

In contrast, school engagement was negatively but non-significantly associated with academic burnout ($\beta =$

-0.042 ; $t = -0.716$; $p = 0.475$). Although engagement is theoretically expected to protect students from burnout by fostering involvement, interest, and connection with learning activities, the present findings suggest that its direct predictive power may be limited in this distance learning context. This result is not entirely inconsistent with previous studies, which have reported mixed findings regarding the strength and significance of engagement–burnout relationships in online education.

Several theoretical explanations may account for the non-significant effect of school engagement observed in this study. From the perspective of Transactional Distance Theory [34], [35], distance learning inherently introduces psychological and communicative gaps between students and instructors. Even when students demonstrate behavioral or cognitive engagement—such as completing assignments or participating in online discussions—the lack of immediacy and emotional connection may weaken the protective effect of engagement against burnout. In such conditions, engagement may not fully compensate for the absence of direct social interaction and support [4], [36].

Additionally, school engagement is a multidimensional construct encompassing behavioral, emotional, and cognitive components. In online learning environments, these components may not develop uniformly. For instance, students may display high cognitive engagement by completing tasks and meeting deadlines, while simultaneously experiencing low emotional engagement due to feelings of isolation or detachment. This imbalance can dilute the overall impact of engagement on burnout outcomes, resulting in non-significant direct effects at the aggregate level. Another plausible explanation concerns the mediating roles of self-regulated learning and coping mechanisms [25]. Achievement motivation is closely linked to self-regulation processes, including planning, monitoring, and evaluating learning progress. Highly motivated students are more likely to engage in effective self-regulated learning strategies, thereby reducing stress and emotional exhaustion [37]. When self-regulation and intrinsic motivation are strong, the additional contribution of engagement may become less pronounced, thereby diminishing its observable effect on burnout in regression models.

The nature of distance learning itself may further weaken the engagement–burnout relationship. Variability in technological access, instructional design quality, and opportunities for online interaction can significantly shape students' engagement experiences. Inconsistent internet connectivity, limited feedback, and passive instructional formats may constrain meaningful engagement, thereby reducing their effectiveness as buffers against burnout [38], [39]. Consequently, engagement becomes highly situational and dependent on external conditions, whereas

achievement motivation remains a more stable internal resource.

Descriptive findings from this study further contextualize these results. Most participants reported low to moderate levels of achievement motivation and school engagement, while academic burnout predominantly fell within the moderate category. This pattern suggests a potential risk profile in which students are not yet experiencing extreme burnout but may become increasingly vulnerable if academic demands intensify or motivational resources decline. In such circumstances, insufficient achievement motivation could accelerate the progression from moderate to high burnout, particularly in self-directed learning environments.

Taken together, these findings underscore the importance of prioritizing internal motivational enhancement to reduce academic burnout among distance-learning students. While fostering engagement remains important, interventions that focus exclusively on increasing participation or activity levels may be insufficient if students lack strong intrinsic motivation and self-regulatory capacity. Instead, academic support strategies should emphasize goal clarity, the development of self-efficacy, and meaningful feedback that reinforces students' sense of competence and progress.

At the institutional level, universities offering distance learning programs should integrate motivational training, self-regulated learning support, and adaptive instructional feedback into their academic support systems. Providing structured guidance on goal setting, time management, and reflective learning practices can strengthen students' internal resources and resilience. Additionally, improving the quality of instructional design and feedback mechanisms may indirectly enhance engagement by making learning experiences more meaningful and manageable.

In summary, this study contributes to the growing body of literature on academic burnout in distance learning by demonstrating that achievement motivation plays a more decisive role than school engagement in reducing burnout symptoms among undergraduate students. While engagement remains an important component of the learning process, its protective effect against burnout appears to be contingent on contextual and technological factors. Strengthening students' motivational resources and self-regulatory capacities, therefore, represents a critical pathway for mitigating academic burnout in distance learning higher education.

IX. CONCLUSION

This study provides empirical evidence on the relationships between achievement motivation, school engagement, and academic burnout among undergraduate distance learning students at Universitas Terbuka Surabaya. The findings confirm that achievement motivation and school engagement jointly

explain a significant proportion of variance in academic burnout. However, achievement motivation emerged as the dominant independent predictor, while school engagement did not demonstrate a significant direct effect on burnout.

The strong negative association between achievement motivation and academic burnout underscores the importance of internal motivational resources in distance learning contexts, where students rely heavily on self-regulation and independent study. Students with higher achievement motivation are better equipped to persist through academic challenges, manage learning demands, and maintain psychological resilience, thereby reducing their susceptibility to emotional exhaustion and cynicism.

The non-significant effect of school engagement suggests that engagement alone may be insufficient to buffer against burnout in technology-mediated learning environments. Variability in instructional design, quality of online interaction, and access to learning resources may weaken the protective role of engagement. These findings indicate that engagement may operate indirectly through motivational and self-regulatory mechanisms rather than directly influencing burnout.

From a practical perspective, the results highlight the need for distance learning institutions to prioritize interventions that strengthen students' achievement motivation, self-efficacy, and self-regulated learning skills. Academic support systems should focus on goal clarification, timely and constructive feedback, and structured guidance to enhance students' internal resources. By addressing these factors, higher education institutions can more effectively mitigate academic burnout and promote sustainable student well-being in distance learning environments.

Future research is encouraged to examine additional variables, such as self-regulated learning, social support, and instructional quality, to further elucidate the complex mechanisms underlying academic burnout in distance-learning contexts.

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