

Stress Under Surveillance: Mapping Psychological Pathways of Time Use To Academic Stress through Grit Psychological Resources

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Abstract

This study examined the relationships among time management, grit psychological resources (GPRs), and academic stress among criminology students in a private tertiary institution in Central Visayas, Philippines. Using a quantitative correlational design, data were collected from 375 students through standardized instruments: the Time Management Questionnaire (TMQ), Lakaev Academic Stress Response Scale (LASRS), and Grit Psychological Resources Scale (GPRS). Descriptive statistics revealed moderate time management, low-to-moderate academic stress, and high levels of GPRs. Pearson correlation analysis indicated significant positive relationships between time management and GPRs but non-significant associations between time management and academic stress. Mediation analysis showed that practice significantly reduced academic stress, while hope demonstrated a complex positive indirect effect. Findings suggest that time management influences stress indirectly through psychological mechanisms. The study highlights the importance of integrating behavioral and psychological interventions to support student well-being.

Keywords: time management; academic stress; grit psychological resources; criminology students; mediation

1. INTRODUCTION

1.1 Background of the Study

Student retention and completion are key indicators of institutional effectiveness in higher education. However, many institutions continue to experience challenges related to student attrition, particularly in academically demanding programs such as criminology. These challenges are often linked to a combination of academic, psychological, and behavioral factors.

Time management has been identified as a critical determinant of academic success. Poor time management is associated with procrastination, decreased academic performance, and increased stress. Academic stress, defined as the psychological and physiological response to perceived academic demands, has been widely documented as a significant concern among college students.

Recent developments in positive psychology have introduced grit as an important construct in understanding persistence and resilience. In this study, grit is conceptualized as **grit psychological resources (GPRs)**—including interest, purpose, practice, and hope—which are considered dynamic and developable rather than fixed traits.

1.2 Research Gap

Existing studies have largely examined time management, academic stress, and grit independently. There is limited research investigating how these variables interact, particularly among Filipino criminology students who face unique academic and field-related demands.

1.3 Objectives of the Study

This study aimed to:

1. Determine the levels of time management, academic stress, and GPRs
2. Examine the relationships among these variables
3. Determine whether GPRs mediate the relationship between time management and academic stress

METHODS

2.1 Research Design

This study utilized a **quantitative correlational research design** with mediation analysis. This approach allowed the examination of relationships among variables without manipulation.

2.2 Participants

The respondents consisted of **375 undergraduate criminology students** selected through proportionate stratified random sampling. The sample represented all year levels in a private tertiary institution in Central Visayas.

2.3 Research Instruments

The study utilized three standardized instruments to measure the key variables. The Time Management Questionnaire (TMQ) assesses students' time management behaviors, specifically focusing on short-range planning, time attitudes, and long-range planning. Academic stress was measured using the Lakaev Academic Stress Response Scale (LASRS), which evaluates stress responses across four domains: physiological, cognitive, affective, and behavioral. Meanwhile, psychological resources were assessed using the Grit Psychological Resources Scale (GPRS), which captures four dimensions, namely interest, purpose, practice, and hope. All instruments demonstrated acceptable reliability (Cronbach's alpha ranging from 0.77 to 0.91).

2.4 Data Collection Procedure

Data were collected through self-administered questionnaires after obtaining institutional approval and informed consent from participants. Confidentiality and voluntary participation were strictly observed.

2.5 Statistical Treatment

Data were analyzed using a combination of descriptive and inferential statistical techniques. Descriptive statistics, specifically mean and standard deviation, were employed to summarize the central tendency and variability of the variables. Pearson correlation coefficient (r) was used to examine the relationships among the study variables. To test the mediating effects, mediation analysis was conducted using PROCESS Macro (Model 4) with 5,000 bootstrap samples to ensure robust estimation of indirect effects. All statistical tests were evaluated at a 0.05 level of significance ($\alpha = .05$).

3. RESULTS

3.1 Time Management

Table 1
Level of Time Management Among Criminology Students

Subscale	Mean (M)	SD	Interpretation
Short-Range Planning	3.16	0.74	Moderate
Time Attitudes	3.09	0.55	Moderate
Long-Range Planning	2.99	0.61	Moderate
Overall (TMQ)	3.09	0.41	Moderate

Note. Scale: 1.00–2.33 = Low; 2.34–3.66 = Moderate; 3.67–5.00 = High.

The overall level of time management was **moderate** ($M = 3.09$, $SD = 0.41$). Short-range planning had the highest mean, while long-range planning had the lowest.

3.2 Academic Stress

Table 2
Level of Academic Stress Among Criminology Students

Subscale	Mean (M)	SD	Interpretation
Physiological	1.86	0.59	Low
Cognitive	2.34	0.68	Moderate
Affective	2.43	0.73	Moderate
Behavioral	1.70	0.74	Low
Overall	2.16	0.56	Low

Note. Scale: 1.00–2.33 = Low; 2.34–3.66 = Moderate; 3.67–5.00 = High.

Academic stress was found to be **low to moderate** ($M = 2.16$, $SD = 0.56$). Affective stress recorded the highest level, while behavioral stress was the lowest.

3.3 Grit Psychological Resources

Table 3
Level of Grit Psychological Resources (GPRs)

Subscale	Mean (M)	SD	Interpretation
Interest	5.10	0.94	High
Purpose	5.48	0.94	High
Practice	5.27	1.00	High
Hope	5.55	1.04	High
Overall	5.35	0.81	High

Note. Scale: 1.00–3.00 = Low; 3.01–5.00 = Moderate; 5.01–7.00 = High.

Students demonstrated **high levels of GPRs** ($M = 5.35$). Hope and purpose were the strongest dimensions, while interest had the lowest mean among the subscales.

3.4 Correlation Analysis

Table 4
Pearson Correlations Among Variables

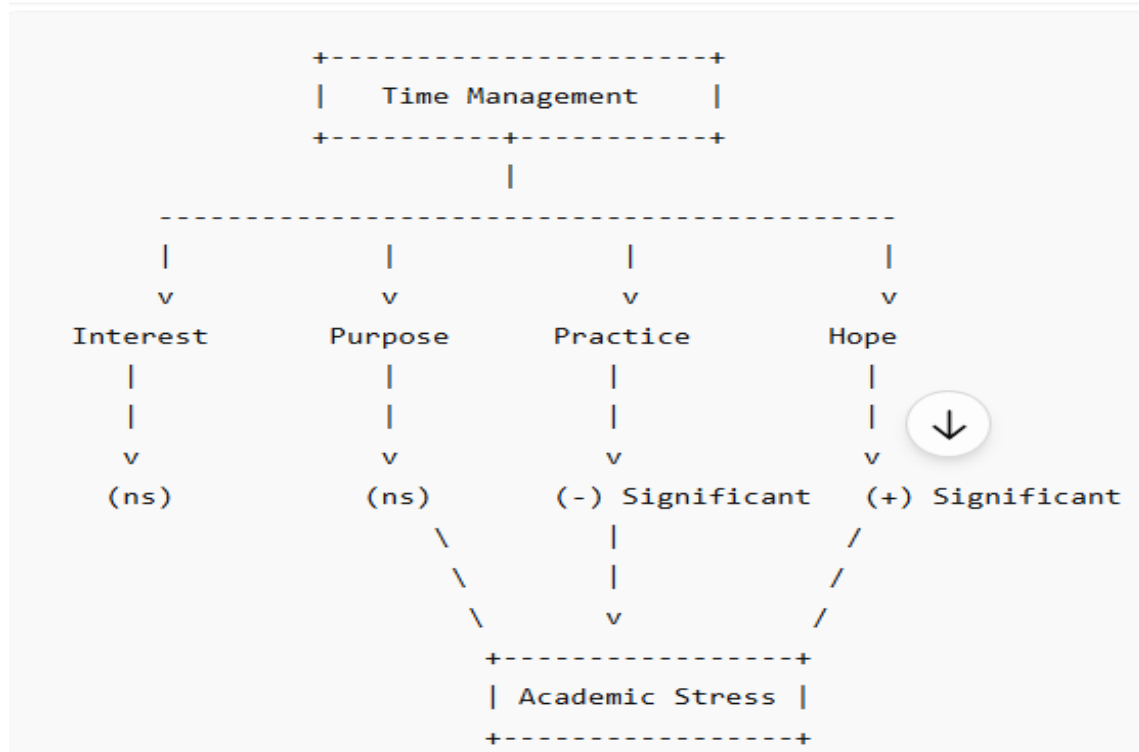
Variables	r	p-value	Interpretation
TMQ – GPRS Interest	0.265	< .001	Significant (small–moderate)
TMQ – GPRS Purpose	0.204	< .001	Significant (small)
TMQ – GPRS Practice	0.281	< .001	Significant (small–moderate)
TMQ – GPRS Hope	0.279	< .001	Significant (small–moderate)
TMQ – Academic Stress	-0.101	.051	Not significant
GPRS – Academic Stress (overall)	ns	> .05	Not significant

Time management demonstrated significant positive correlations with all dimensions of grit psychological resources ($p < .001$), indicating that students who effectively manage their time tend to exhibit higher levels of interest, purpose, practice, and hope. However, the relationship between time management and academic stress was negative but not statistically significant, suggesting that better time management alone does not necessarily lead to a meaningful reduction in stress levels. Furthermore, grit psychological resources were not significantly related to academic stress, implying that these psychological strengths may not directly influence stress but could operate through more complex or indirect pathways.

3.5 Mediation Analysis

Figure 1

Mediating Role of Grit Psychological Resources in the Relationship Between Time Management and Academic Stress



The figure illustrates both significant and non-significant pathways among the study variables. Results show that the indirect pathway from Time Management through Practice to Academic Stress is significant and negative, indicating that better time management enhances practice, which, in turn, reduces academic stress. In contrast, the pathway from Time Management through Hope to Academic Stress is also significant but positive, suggesting that higher levels of hope are associated with increased academic stress in this model. Meanwhile, Interest and Purpose did not show significant effects on Academic Stress, indicating that these variables do not meaningfully contribute to stress prediction in the current model. Lastly, the direct effect of Time Management on Academic Stress is weak and non-significant, suggesting that its influence is primarily indirect, mediated by intervening variables.

4. DISCUSSION

This study examined the relationships among time management, grit psychological resources (GPRs), and academic stress among criminology students, with particular emphasis on the mediating role of psychological resources. The findings contribute to the growing body of literature in educational psychology and student well-being by offering an integrated perspective on behavioral and psychological determinants of academic stress.

First, the findings revealed that students demonstrated a moderate level of time management, with stronger performance in short-range planning than long-range planning. This pattern is consistent with previous studies indicating that students tend to prioritize immediate academic demands over long-term planning (Britton & Tesser, 1991; Wolters & Brady, 2020). From a self-regulated learning perspective, effective time management requires not only task completion but also future-oriented goal setting and strategic monitoring (Zimmerman, 2002). The relatively lower scores in long-range planning suggest that students may lack advanced self-regulatory strategies necessary for sustained academic success, particularly in demanding programs such as criminology.

Second, the results indicated low to moderate levels of academic stress, with affective and cognitive domains being more prominent than physiological and behavioral responses. This finding aligns with the multidimensional conceptualization of academic stress proposed by Lakaev (2022), which emphasizes emotional and cognitive responses as primary indicators of stress. The predominance of affective stress suggests that students experience emotional strain, such as anxiety and worry, even when outward behavioral disruptions are minimal. This is supported by studies showing that internalized stress responses are more common among university students who maintain functional academic performance despite psychological strain (Barbayannis et al., 2022; Córdova et al., 2023).

Third, the study found that students exhibited high levels of grit psychological resources, particularly in hope and purpose. This supports the positive psychology framework, which posits that psychological strengths such as perseverance, goal orientation, and optimism contribute to resilience and well-being (Duckworth, 2016; Schimschal et al., 2023). The high levels of hope and purpose observed in this study are consistent with findings that these constructs are strong predictors of academic persistence and retention (Gallagher et al., 2016; Griggs, 2017). In the context of criminology education, these resources may be reinforced by strong professional identity and career aspirations in public service.

However, the correlational analysis revealed that time management was significantly associated with GPRs but not with academic stress, and GPRs were also not directly related to academic stress. This finding suggests that the relationship between these variables is not straightforward. Similar results have been reported in previous studies, where behavioral skills such as time management do not directly predict stress reduction due to the influence of external stressors, including academic workload and institutional demands (Strom et al., 2023; Skrbinjek, 2023). Additionally, Park (2018) argued that psychological resources often influence outcomes indirectly rather than through direct effects, which supports the rationale for mediation analysis.

The most significant contribution of this study lies in the mediation analysis, which revealed that specific components of GPRs function as mechanisms linking time management to academic stress. In particular, practice emerged as a significant negative mediator, indicating that students who translate time management into consistent, disciplined effort experience lower levels of stress. This finding aligns with self-regulation theory, which emphasizes the role of sustained effort and behavioral consistency in achieving academic goals (Wolters & Brady, 2020). It also supports research suggesting that deliberate practice enhances competence

and reduces uncertainty, thereby lowering stress (Ericsson et al., 1993; Southwick et al., 2019).

In contrast, hope demonstrated a significant positive indirect effect on academic stress, indicating a more complex relationship. While hope is generally considered a protective factor, this finding suggests that higher levels of hope may be associated with increased stress due to heightened expectations and goal-related pressure. This dual role of hope is supported by Snyder's Hope Theory, which posits that goal-directed thinking can generate both motivation and pressure (Snyder, 2002). In high-demand academic environments, students with strong aspirations may experience anticipatory stress as they strive to meet their goals. Similar findings have been reported in studies showing that highly motivated students may experience greater stress due to performance expectations (Bryce et al., 2021).

Interestingly, interest and purpose did not significantly mediate the relationship, suggesting that not all components of grit function equally in stress regulation. This supports arguments in the literature that grit is a multidimensional construct, and its components may have differential effects depending on context (Christopoulou et al., 2018; Minnigh et al., 2024). While interest and purpose contribute to long-term engagement, they may not directly influence immediate stress responses.

Overall, the findings support an integrated psychological model in which:

- Time management enhances grit psychological resources
- Specific components of grit (particularly practice) translate behavioral regulation into stress reduction
- Other components (such as hope) may introduce complexity by increasing performance-related pressure

This study extends the existing literature by demonstrating that academic stress is not reduced solely by behavioral skills or psychological strengths, but by their interaction. This highlights the importance of designing interventions that combine time management training with psychological resource development, rather than treating them as separate domains.

CONCLUSION

This study concludes that academic stress among criminology students is indirectly influenced by time management through grit psychological resources. The findings indicate that time management enhances GPRs, which in turn function as important mediating variables in the relationship between time management and academic stress. Specifically, the results show that the practice dimension of GPRs reduces academic stress, whereas hope may, under certain conditions, be associated with increased stress levels. Overall, these findings emphasize the importance of integrating behavioral competencies, such as effective time management, with strengthening psychological resources to better manage academic stress.

RECOMMENDATIONS

The study recommends the implementation of structured time management training programs that emphasize long-term planning to enhance students' organizational skills. It also suggests the development of grit-based interventions that focus on strengthening disciplined practice as a key psychological resource. In addition, integrating stress management and resilience-building programs within guidance and counseling services is

recommended to help students better cope with academic pressures. Finally, the study encourages future researchers to conduct longitudinal and experimental studies to further validate and expand the findings of the current research.

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