

The Influence of Resilience and Time Management on Academic Motivation among University Student-Athletes

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ABSTRACT This study explores the influence of resilience and time management on academic motivation among university student-athletes in Malaysia. A quantitative cross-sectional correlational design was employed, involving 152 student-athletes recruited through snowball sampling from public and private universities. The results revealed that both resilience and time management were significantly and positively correlated with academic motivation. Multiple regression analysis indicated that resilience and time management significantly predicted academic motivation. Time management emerged as the stronger predictor compared to resilience. These findings suggest that while resilience functions as an important psychological resource for coping with academic and athletic demands, time management plays a more immediate and practical role in sustaining academic engagement among student-athletes. The study contributes to the literature by highlighting the differential roles of psychological and behavioural factors in academic motivation, particularly within the Malaysian context. Implications for practice include the need for targeted interventions focusing on time management and self-regulation skills, as well as institutional support mechanisms to assist student-athletes in managing dual-role demands effectively.

Keywords: resilience, time management, academic motivation, student-athletes.

Introduction

Student-athletes refer to individuals who are enrolled in higher education institutions while actively participating in organised competitive sports (Simón-Grábalos et al., 2025; Yukhymenko-Lescroart & Sharma, 2022). Within university settings, they are often regarded as a unique group due to the need to balance academic commitments alongside demanding training and competition schedules (Stambulova & Harwood, 2022). Managing these dual responsibilities is not without challenges. Previous research indicates that such competing demands may contribute to heightened stress levels, physical fatigue, and an increased risk of burnout among student-athletes (Gustafsson et al., 2017; Yukhymenko-Lescroart & Sharma, 2022).

Previous research has highlighted that motivation among student-athletes is not always consistent across domains. In particular, high levels of athletic motivation do not necessarily translate into equivalent engagement in academic

activities (Simons & Covington, 1999). This discrepancy suggests that motivation may operate differently depending on the context and competing demands faced by student-athlete. Within academic settings, motivation remains a critical factor influencing students' persistence and overall success. From a theoretical perspective, Self-Determination Theory posits that motivation is shaped by the fulfilment of three basic psychological needs, namely autonomy, competence, and relatedness (Deci & Ryan, 1985). When these needs are adequately supported, individuals are more likely to demonstrate sustained engagement and intrinsic motivation. Stereotypes portraying student-athletes as less academically capable have been shown to negatively influence academic self-perception and engagement (Yukhymenko-Lescroart & Sharma, 2022). Resilience has been associated with adaptive coping and sustained performance under pressure among athletes (Fletcher & Sarkar, 2012; Gupta & McCarthy,

2022). However, its direct influence on academic motivation may depend on contextual factors such as institutional support and academic demands (Giacomazzi, 2024). Time management has been consistently linked to academic performance and self-regulation among university students (Britton & Tesser, 1991; Claessens et al., 2007). Cultural values, including collectivist orientations, may also shape academic motivation in Asian contexts (Hofstede, 2001).

Much of the existing literature on student-athletes is derived from structured systems such as the National Collegiate Athletic Association (NCAA), where formal dual-career support mechanisms are well established. In contrast, evidence suggests that structured dual-career support systems are still developing in Malaysian universities (Jakiwa et al., 2022). As a result, student-athletes may need to rely more on personal coping strategies to manage competing academic and athletic demands. To date, limited studies have examined the combined influence of resilience and time management on academic motivation among student-athletes, particularly within the Malaysian context. Therefore, this study aims to examine the influence of resilience and time management on academic motivation among university student-athletes in Malaysia.

Resilience in Student-Athletes

Resilience is commonly conceptualised as a dynamic process involving the capacity to adapt positively in the face of adversity and maintain functioning under pressure. In sport psychology, resilience has been associated with effective coping, emotional regulation, and sustained performance among athletes (Fletcher & Sarkar, 2012). A systematic review by Gupta and McCarthy (2022) shows that resilience helps athletes deal with competitive stress and maintain their psychological well-being. Recent studies also suggest that resilience is linked to academic motivation among university students. For example, students with higher resilience tend to show stronger intrinsic and extrinsic motivation, and lower levels of amotivation (Abdolrezaipoor et al., 2023; Kotera et al., 2022).

However, the role of resilience in academic outcomes may not always be direct. Some studies indicate that resilience works through other factors, such as self-concept, emotional intelligence, and academic engagement (García-Martínez et al., 2022; González-Yubero et al., 2025). This means that resilience alone may not fully explain academic motivation. Instead, it appears to be one of several factors that work together. For student-athletes, this may be even more important. The impact of resilience can depend on the environment, including the level of institutional support, academic flexibility, and access to coping resources.

Time Management and Academic Functioning

Time management is often understood as how students plan and organise their time to complete tasks. It is commonly linked to self-regulated learning and has been associated with better academic performance (Britton & Tesser, 1991; Claessens et al., 2007). More recent studies suggest that time management is not just a basic skill, but part of a wider set of selfmanagement behaviours that are related to both motivation and academic success (Khawwaf et al., 2024; Stavropoulou et al., 2025).

At the same time, the findings are consistent. Some studies show that time management on its own does not strongly predict academic performance, especially when other factors are taken into account (Aufa et al., 2024; Makiah & Nusron, 2025). This may mean that time management works together with other factors, such as self-efficacy or goal setting, rather than acting alone.

For student-athletes, managing time can be especially challenging. Their schedules are often tight, with training, competitions, and academic work happening at the same time. Because of this, they may face time pressure, fatigue, and difficulty keeping up with academic tasks (Lamban et al., 2025; Thompson et al., 2024). In this situation, time management becomes a practical skill that helps them stay on track. It may also explain why time management has a more direct impact on academic engagement compared to psychological factors like resilience.

Academic Motivation in Dual-Role Contexts

Academic motivation refers to the reasons why students start, continue, and stay engaged in learning. According to Self-Determination Theory, motivation is influenced by three basic needs: autonomy, competence, and relatedness (Deci & Ryan, 2000). When these needs are met, students are more likely to stay motivated and involved in their studies.

However, student-athletes may not always experience these conditions. They often have to balance academic work with sports commitments, which can create pressure and role conflict. This situation may affect their motivation, especially when they struggle to meet both academic and athletic expectations (Yukhymenko-Lescroart & Sharma, 2022). Recent studies also suggest that these challenges are not only personal but are influenced by the environment. Factors such as university policies, academic flexibility, and support systems can shape how student-athletes manage their roles (De Maio et al., 2025; Mao, 2025).

In Southeast Asia, including Malaysia, academic motivation may also be influenced by cultural expectations. Students often face strong pressure to succeed academically, along with expectations from family and society (Nur Atiqah Abdullah et al., 2024; Osman et al., 2023; Suraya & Anuar, 2025). Because of this, motivation among student-athletes may depend not only on personal factors but also on the wider social and institutional context.

Resilience and time management have both been studied in relation to academic performance and well-being. However, fewer studies have looked at how these two factors work together, especially in explaining academic motivation among student-athletes. This gap is more noticeable in non-Western settings. Most of the existing research comes from contexts such as the National Collegiate Athletic Association, where student-athletes often receive structured support to balance academic and athletic roles. Because of this, the findings may not fully reflect the situation in other regions. In Southeast Asia, including Malaysia, there is still limited research in this area. At the same time, differences in culture,

academic expectations, and institutional support may influence how motivation, resilience, and behavioural skills operate. This suggests that findings from Western contexts may not always apply directly. Given this, there is a need for studies that consider both psychological factors (such as resilience) and practical skills (such as time management) within the local context. Therefore, this study examines how resilience and time management relate to academic motivation among university student-athletes in Malaysia.

Research Methodology

Research Design

This study employed a quantitative cross-sectional correlational design to examine the relationships between resilience, time management, and academic motivation among university student-athletes in Malaysia.

Sampling and Participants

A total of 152 university student-athletes from public and private universities in Malaysia participated in this study. Participants were recruited using a non-probability snowball sampling technique, which is commonly employed when targeting specific populations that are not easily accessible (Etikan et al., 2015).

The survey link was initially distributed to known student-athletes and subsequently shared through peer networks via WhatsApp and Telegram. Inclusion criteria required participants to be (i) full-time university students, and (ii) actively involved in competitive sports at any level. Although snowball sampling enabled efficient data collection from a dispersed population, it may limit the generalisability of findings due to potential sampling bias.

Research Instruments

Three established instruments were used in this study to measure resilience, time management and academic motivation.

Resilience

Resilience was measured using the Connor-Davidson Resilience Scale (CD-RISC-10) (Connor & Davidson, 2003). The scale consists of 10 items measured on a 5-point Likert scale ranging from 0 to 4, with higher scores indicating greater levels of resilience. The instrument has demonstrated strong psychometric properties across diverse populations. In the present study, the scale showed high internal consistency, with a Cronbach's alpha coefficient of .876.

Time Management

The Time Management Questionnaire (TMQ) (Britton & Tesser, 1991) consists of 18 items measured on a 5-point Likert scale ranging from 1 (never) to 5 (always), with higher scores indicating more effective time management practices. The instrument assesses key dimensions including planning, time attitudes, and organisation. Negatively worded items were reversecoded prior to analysis. The scale has been widely used in previous research and demonstrates acceptable psychometric properties. In the present study, the instrument showed acceptable internal consistency, with a Cronbach's alpha coefficient of .72.

Academic Motivation

The Academic Motivation Scale (AMS-C 28) (Vallerand, et al., 1992) consists of 28 items measured on a 5-point Likert scale ranging from 1 (does not correspond at all) to 5 (corresponds exactly), with higher scores indicating greater levels of academic motivation. The scale measures multiple dimensions, including intrinsic motivation, extrinsic motivation, and amotivation. The instrument has demonstrated strong psychometric properties in previous studies. In the present study, the scale showed high internal consistency, with a Cronbach's alpha coefficient of .856.

Data Collection Procedure

Data were collected through an online survey administered via Google Forms. Participants were provided with an informed consent statement prior to participation. The survey

ensured anonymity. Ethical considerations were adhered to, including voluntary participation and the right to withdraw at any time.

Data Analysis

Data were analysed using IBM SPSS Version 29. Descriptive statistics, such as means and standard deviations, were first used to describe the main variables in the study. The reliability of the instruments was examined using Cronbach's alpha to ensure internal consistency. Pearson correlation analysis was then carried out to explore the relationships between resilience, time management, and academic motivation. To further examine the influence of the independent variables, multiple regression analysis was conducted to determine how resilience and time management predict academic motivation. Before running the regression, several assumptions, including normality, linearity, and multicollinearity, were checked to ensure that the analysis was appropriate (Field, 2018).

Results

Demographic Characteristics

A total of 152 university student-athletes took part in this study. Of these, 74 were male (48.7%) and 78 were female (51.3%). Most participants were between 24 and 25 years old (34.2%). In terms of academic background, most respondents were in their third (29.6%) or fourth year (27%) of study, and a large proportion reported a CGPA above 3.00. Regarding sports involvement, the majority participated in individual sports (72.4%), while 38.8% competed at the national level. The participants' demographic characteristics are presented in Table 1.

Table 1 Demographic Characteristics of Participants (N = 152)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	74	48.7
	Female	78	51.3
Age	20–21 years	31	20.4
	22–23 years	49	32.2
	24–25 years	52	34.2
	26 and above	20	13.2
Year of Study	Year 1	27	17.8
	Year 2	39	25.7
	Year 3	45	29.6
	Year 4	41	27
Level of Participation	Intracollegiate	21	13.8
	Intercollegiate	36	23.7
	State Level	36	23.7
	National Level	59	38.8

Descriptive Statistics of Resilience, Time Management, and Academic Motivation

Descriptive statistics for the main study variables are presented in Table 2. The mean score for resilience was 43.25 (*SD* = 5.34), followed by time management (*M* = 65.60, *SD* = 7.86) and academic motivation (*M* = 106.46, *SD* = 11.91).

Table 2 Descriptive Statistics of Descriptive Statistics of Resilience, Time Management, and Academic Motivation (N = 152)

Variable	<i>M</i>	<i>SD</i>
Resilience	43.25	5.34
Time Management	65.6	7.86
Academic Motivation	106.46	11.91

Relationships between Resilience, Time Management, and Academic Motivation

Pearson correlation analysis was conducted to examine the relationships between resilience, time management, and academic motivation. The results indicated a significant moderate positive relationship between resilience and academic motivation, $r(149) = .41, p < .001$. Similarly, time management was significantly positively correlated with academic motivation, $r(149) = .42, p < .001$.

Table 3 Correlation Matrix for Study Variables (N = 152)

Variable	1	2	3
Resilience	—		
Time Management	.47**	—	
Academic Motivation	.41**	.42**	—

Note: ** $p < .01$

Predictive Effects of Resilience and Time Management on Academic Motivation

A multiple regression analysis was conducted to examine whether resilience and time management significantly predicted academic motivation. The overall model was statistically significant, $F(2, 149) = 23.45, p < .001$, explaining 23.9% of the variance in academic motivation ($R^2 = .24$, Adjusted $R^2 = .23$). Both resilience and time management were significant predictors of academic motivation. Time management emerged as the stronger predictor ($\beta = .30, t = 3.68, p < .001$), followed by resilience ($\beta = .27, t = 3.37, p < .001$). No multicollinearity issues were detected, as all tolerance values exceeded .10 and VIF values were below 5.

Table 4 Multiple Regression Analysis Predicting Academic Motivation (N = 152)

Predictor	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
Constant	50.54	8.21	—	6.16	< .001
Resilience	0.61	0.18	0.27	3.37	< .001
Time Management	0.45	0.12	0.3	3.68	< .001

Note: $R^2 = .24$, Adjusted $R^2 = .23$, $F(2, 149) = 23.45, p < .001$

These findings indicate that both resilience and time management significantly contribute to academic motivation among student-athletes, with time management showing a slightly stronger influence.

Discussion

The present study examined the influence of resilience and time management on academic motivation among university student-athletes in Malaysia. The results indicate that both variables significantly contribute to academic motivation, with time management emerging as the stronger predictor. The positive association between resilience and academic motivation is generally consistent with previous studies. Prior research has shown that higher levels of resilience are linked to greater intrinsic and extrinsic motivation, as well as lower levels of amotivation

among university students (Abdolrezaipoor et al., 2023; Kotera et al., 2022). In some cases, resilience has also been identified as a significant predictor of academic motivation, particularly when considered alongside other psychological factors such as self-efficacy (Abdolrezaipoor et al., 2023).

However, the present findings also suggest that the role of resilience may be more complex. Rather than presenting a direct effect, resilience may influence academic outcomes through other related factors. For example, previous studies have found that resilience is associated with variables such as self-concept, emotional intelligence, and academic engagement, which in turn contribute to academic performance (García-Martínez et al., 2022; González-Yubero et al., 2025; Ye et al., 2024). This suggests that resilience should be understood as part of a broader set of psychological resources, rather than as a single determinant of academic motivation.

The finding that time management is a stronger predictor of academic motivation adds to current discussions on self-regulation and self-management. Recent studies often view time management as part of a broader self-regulatory system that is closely linked to both academic motivation and academic performance (García et al., 2023; Khawwaf et al., 2024; Stavropoulou et al., 2025). At the same time, there is growing recognition that its role is not always independent. Evidence suggests that time management tends to be more effective when combined with other self-regulatory processes, such as goal setting, monitoring, and self-efficacy (Al-Abyadh & Azeem, 2022; Simón-Grábalos et al., 2025). In contrast, some studies report weaker or non-significant effects when time management is examined on its own, particularly after controlling for other variables (Aufa et al., 2024; Makiah & Nusron, 2025).

In the context of the present study, this pattern may help explain why time management emerged as a significant predictor. Its influence could reflect its function as a behavioural mechanism that helps translate motivation into concrete actions. This may be especially relevant in structured and time-constrained settings, such as those experienced by student-athletes. These findings can also be better understood

when considering the broader demands placed on student-athletes. Previous research has consistently shown that balancing academic and athletic responsibilities is often challenging, with issues such as time conflicts, workload pressure, and mental fatigue commonly reported (Lamban et al., 2025; Liu & Taresh, 2024; Thompson et al., 2024). Over time, these pressures may contribute to stress, burnout, and reduced academic engagement (Mao, 2025; Storey et al., 2022).

In such contexts, time management appears to function as an important adaptive strategy. Evidence suggests that practices such as effective scheduling, prioritisation, and flexible adjustment of tasks are linked to better academic performance and overall well-being among student-athletes (Ator & Ortizo, 2024; Liu & Taresh, 2024). This supports the present finding that time management may play a more immediate and practical role, whereas resilience operates at a more distal psychological level.

The Malaysian and broader Southeast Asian context provides an additional perspective. Recent regional studies indicate that academic motivation, resilience, and time management are shaped by collectivist values, strong academic expectations, and family-related pressures (Abdullah et al., 2023; Alisyahbana et al., 2025; Osman et al., 2023). In contrast to many Western contexts, where intrinsic interest and personal enjoyment are often emphasised, research in Malaysia suggests that achievement-oriented and discipline-based motivations are more closely linked to academic success (Suraya & Anuar, 2025). This contextual difference may help explain why time management emerged as a stronger predictor in the present study. In environments characterised by high expectations, the ability to organise time and meet academic demands may be especially important for maintaining motivation.

From a theoretical standpoint, these findings can be understood using Self-Determination Theory (Deci & Ryan, 2000). While resilience may support autonomy through adaptive coping, time management may strengthen perceived competence by helping students manage academic demands more effectively. This may explain why competence-related processes appear particularly important in structured and demanding contexts.

Although the model explained 23.9% of the variance in academic motivation, a large proportion remains unexplained. This suggests that other factors, such as academic self-efficacy, institutional support, and psychological capital, may also play a role (Khawwaf et al., 2024; Zhao et al., 2023). Future research may benefit from including these variables to provide a more comprehensive understanding of academic motivation. Overall, the findings suggest that resilience remains a relevant psychological resource, but behavioural skills such as time management may have a more direct and context-dependent influence on academic motivation among student-athletes, particularly within Southeast Asian higher education settings.

Implications

The findings of this study add to the literature on academic motivation by showing that psychological and behavioural resources do not play the same role among student-athletes. While resilience has often been treated as a key personal strength, the results here point to the importance of behavioural skills, particularly time management, which appear to have a more immediate and context-dependent influence on motivation.

From a theoretical perspective, this pattern can be interpreted using Self-Determination Theory. In demanding academic environments, the ability to organise time and complete tasks may strengthen students' sense of competence, which in turn supports motivation. In addition, the findings offer a useful extension to Dual Career Theory. Rather than assuming that all personal resources contribute in the same way, the results suggest that resilience and time management operate at different levels. Resilience may support coping, whereas time management seems to function more directly in shaping day-to-day academic engagement.

In terms of practice, the findings indicate that support programmes for student-athletes may need to go beyond a sole focus on resilience. While psychological support remains important, there is also value in helping students develop practical skills. For example, training that focuses on planning and scheduling, prioritising tasks,

and setting clear goals may help student-athletes manage competing demands more effectively. Skills such as self-monitoring and task adjustment may also be useful, as they allow students to track their progress and respond to changing demands over time.

Such support may be particularly relevant in settings where formal structures for student-athletes are still developing. Many student-athletes continue to face challenges related to time pressure, workload, and balancing academic and athletic roles, all of which can affect motivation and well-being. In this regard, institutions may also consider broader forms of support, such as more flexible academic arrangements, access to academic support services, and mentoring systems that help students navigate dual-role expectations. This is especially relevant in Southeast Asian contexts, where academic demands and performance expectations are often high.

The study also points to several directions for future research. Given that the model explained only 23.9% of the variance in academic motivation, other factors are likely to be involved. Variables such as academic self-efficacy, psychological well-being, and institutional support may provide additional insight and should be considered in future studies. It may also be useful to move beyond cross-sectional designs. Longitudinal or experimental approaches could help clarify how resilience and time management influence motivation over time. Finally, more work is needed to understand how these relationships vary across different cultural contexts. Differences in values, expectations, and educational systems may shape how motivation develops, and comparative studies could help to clarify these patterns.

Conclusion

This study explored how resilience and time management relate to academic motivation among university student-athletes in Malaysia. The results show that both factors play a role, although time management appears to have a stronger influence. These findings suggest that it is useful to distinguish between psychological and

behavioural resources when examining academic motivation. While resilience remains important in helping students cope with challenges, time management seems to play a more direct role in supporting day-to-day academic engagement, particularly in situations where students are required to manage both academic and athletic commitments. Taken together, the results offer context-specific insights into the experiences of student-athletes in Malaysia. This study also points to the importance of combining individual-level skills with institutional support in helping Malaysian student-athletes manage dual-role demands and maintain their academic performance.

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