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Hope and grit: the driving forces behind student-athletes' motivation in sports and academics

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ABSTRACT

While the challenges student-athletes face in balancing academics and sports have garnered increasing attention, few studies have explored how factors like hope and grit contribute to this balance and enhance motivation. This study investigated the relationship between hope, grit, and motivation of academic and sports of student-athletes. A total of 247 student-athletes of Mindanao State University-Iligan Institute of Technology (MSU-IIT) answered a set of questionnaires assessing grit, dispositional hope, and student-athletes motivation towards sports and academics with the age range of 18-24 years old. Ethical approval was gained from the participants. The results showed that factors of hope (agency and pathways) and grit (consistency of interest or COI and perseverance of effort or POE) were significant predictors of motivation in sports and academics. This suggests that student-athletes with higher levels of hope and grit demonstrate increased motivation in both domains. These results could offer a more valuable insights for coaches, educators, and sports psychologist striving to support the long-term success and wellbeing of student-athletes.

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1. INTRODUCTION

Several research topics have emphasized that college student-athletes face a unique challenge in navigating the motivation towards sports and academics. Student-athletes must maintain a certain levels of academic achievement in order to sustain their eligibility for their sport, while simultaneously facing significant pressure to excel in their athletic skills [1], [2]. This precise balance can sometimes lead to conflicts between their academic and athletic desires, which can have a significant repercussion for their overall well-being and success. Various studies have shown that student-athletes have difficulties staying motivated in both areas due to demanding practicing schedules, competitions, academic workloads, and the pressure to excel in both domains [2], [3]. College student-athletes dedicate a significant amount of time, typically 20 to 30 hours, to various activities associated with their sports such as trainings, strength and

conditioning exercise to maintain their level of competitiveness [4]. Moreover, student-athletes may struggle academically due to their focus to athletic performance, which ultimately, lead them to injuries, reduced social connections, and limited post-athletic career opportunities (e.g., difficulty obtaining employment beyond sports) [4], [5].

While many student-athletes exhibit a strong motivation for sports, their motivation for academics is often lacking, resulting in poor performance in class [3]. On the other hand, those who mostly focus with their academics may lack the ability to maintain their athletic growth [6]. This imbalance of motivation could result in negative consequences such as burnout, work inhibition in the ailing area, or in the extreme, dropout of sports or academic work [7], [8]. Thus, there is growing concern and increasing interest in understanding student-athletes motivation towards both sports and academics across various research contexts [3], [9]. Research has linked student-athletes motivation towards sports and academics to be positively associated with their overall success, including robust social support from friends, family, and coaches [10], enhanced sportsmanship orientations and sustained dedication to their sport [11] and greater achievement school activities [12]. Given the significant and prevailing roles of athletics and academics in the lives of student-athletes, it is probable that the motivation of student-athletes in these two areas is interconnected [2], [13]. The significant influence of student-athletes' motivation towards sports and academics (SAMSA), together with the wide recognition that it can be cultivated and enhanced, has resulted in a rising curiosity in understanding the mechanism that contributes to its development in both domains. Notwithstanding the increasing focus on the difficulties encountered by student-athletes to participate in both academics and athletics, however, limited studies have explored the specific factors that influence this balance, and how these factors influence the motivations of both sports and academics.

Hope refers to the anticipated capacity to carry out planned paths towards desirable future objectives. Specifically, hope is a cognitive motivational process consisting of two components, which is mostly examined using theory of hope and its associated scales [14]. The initial element of hope can be identified as pathways. Pathways refer to the conceptualized routes to achieve objectives. Highly hopeful individuals, as indicated by their average level of hope, not only excel at visualizing realistic routes to their objectives , but also generate various alternative routes and a greater number of goals overall, in the event of unforeseen obstacles in the pursuit of goals or if a goal becomes unachievable [14], [15]. Agency constitutes the second element of hope. This component refers to the conviction, together with the accompanying drive and determination, that individuals possess in their ability to pursue their envisioned courses of action to achieve their intended objectives [14], [16]. Individuals with high levels of hope have been shown to employ increased strategies that foster more robust beliefs in their capacity to achieve objectives [15].

Hope, in sports context, serves as a means of fostering endurance, a crucial attribute in the face of challenges such as injury, defeat, or other circumstances that may afflict athletes [17]. Athletes who have heightened levels of hope inherently demonstrate increased drive to achieve their athletic goals because of their steadfast conviction in their capacity to succeed, even when faced with obstacles [18]. This mindset serves as a driving force for athletes to sustain athletes' commitment to their training regimens, recover from setbacks, and continuously enhance their performance [17], [19]. Additionally, high levels of hope in individuals is positively associated with improved performance [20], enhanced overall well-being [21], strengthened social adaptation, competence and demonstrate mental resilience in sports [16], [19]. Likewise, within the realm of academics, hope functions as a potent catalyst for student-athletes. It enables athletes to establish academic objectives and maintain their motivation to achieve their goals, even in the face of time limitations and the competing demands of sports and study [17], [18]. When students possess a robust sense of hope, they have confidence in their capacity to overcome academic obstacles, such as demanding coursework, examinations, or managing conflicting deadlines with their athletic obligations [22], [23]. Students that are optimistic are more inclined to demonstrate traits such as perseverance, effective time management, and proactive learning, which actively contribute to increased academic success [22].This hopeful perspective not only motivates them to pursue solutions when challenges occur but also inspires them to establish greater academic goal and stay dedicated to attaining goals, even in the midst of difficulties [24]. Ultimately, student that demonstrate hope tend to display elevated levels of academic involvement and heightened sense of satisfaction, leading to enhanced performance both inside and outside the educational setting [22], [24].

Within the framework of self-determination theory (SDT) [25], hope assumes a pivotal function in stimulating student-athletes by satisfying their fundamental psychological needs of autonomy, competence, and relatedness. Motivated student-athletes experience a feeling of mastery over their goals and strategies to accomplish them, therefore, augmenting their needs for autonomy [26].The establishment of this feeling of control is crucial for both athletic and academic endeavors, as it ensures that their actions are in harmony with their individual values and interest [25], [26]. Furthermore, hope enhances athletes' confidence in their own capabilities, therefore cultivating a feeling of proficiency [15], [20].

Grit is defined as a complex personality trait that encompasses the extent to which individuals sustain interest and concentration on a significant objective (or objectives) for extended periods of time, known as consistency of interests (COI), and the extent to which individuals persist in achieving these objectives despite challenges, frustration, and tedium, known as perseverance of effort (POE) [27]. Studies suggest that grit is mostly linked to adaptive traits that are utilized in various situations of achievement [28]. For instance, heightened grit has been associated with enhanced academic achievement in high school students [29], increased emotional intelligence in undergraduate students [27], greater optimism in school teachers [30], decreased procrastination in university [31], and reduced burnout levels [32]. Nevertheless, there is a scarcity of research investigating the impact of grit on students' motivation in both sports and academic.

Academic grit enables students to persevere when faced with difficulties, sustain constant effort, and stay focused in their academic goals despite challenges [33], [34]. Extensive research has demonstrated that individuals who exhibit higher levels of grit generally attain superior academic results, including higher grades and increased overall satisfaction with their educational experiences [35]. Perseverance serves as essential for surmounting challenges and sustaining motivation over long periods, which is necessary for academic achievement [33], [36]. Moreover, studies suggest that grit is particularly linked to adaptive traits and outcomes in many situations. Higher grit levels were associated with increased academic success [27], [37], higher educational attainment [36] and higher levels of satisfaction with college life [38]. Grit is essential in the sports environment as it plays a vital part in enabling student-athletes to surmount difficulties. Active involvement in sports can foster the cultivation of perseverance as sports offer a wide range of physical, mental, and social obstacles [39]. Athletes that possess greater levels of grit are more inclined to persevere during challenging training sessions, sustain concentration during difficult events, and bounce back from setbacks with a renewed dedication to continuous growth [27], [40]. Empirical evidence suggests a significant connection between grit and athletic performance. Gray *et al*. [32] discovered that an individual with elevated levels of grit generally surpass their less grit counterparts, not due to inherent superiority, but as they more inclined to invest the substantial effort and time needed to achieve mastery. Thus, gritty athletes pursue excellence relentlessly and see failures as opportunities to progress rather than quit.

According to the SDT [25], [26], grit which is passion that is coupled with perseverance concerning the long-term goals is vital in the students' motivation for sports and academic activities [37], [41]. SDT focuses on the fulfillment of three basic psychological needs (autonomy, competence, and relatedness) [42], [43]. Grit complements these needs because it enlists the student athletes to persevere in their pursuits even when they are faced with adversities making sure they do not wane on either front [18]. Grit enables student-athletes to be independent to manage path towards academic and athletic achievements as they get motivated to conquer challenges with the mastery of decision-making [18]. In terms of competence, determined student athletes often exert more effort to achieve proficiency not only in their academic pursuits but also in their sports endeavors. This relentless pursuit of efficiency aligns perfectly with the ideas of the SDT and the concept of designing for individuals to feel competent and successful [25], [26]. Grit also enhances the sense of connectedness, as student-athletes instinctively seek comfort among their coaches, teachers, and peers to address the diverse challenges they face [18], [41]. Thus, by instilling perseverance, grit guarantees that student-athletes will fulfill their psychological needs according to the principles of SDT [25], so promoting their long-term success in sports and academics. Hence, grit proves advantageous in effectively handling the requirements of dual roles, while ensuring that one has high motivation to excel in both fields.

This study addresses a critical gap in understanding how hope and grit directly influence the dual motivation of student-athletes in both academics and sports. While previous studies have acknowledged the difficulties encountered by student-athletes, there remains a lack of clarity and conceptual understanding regarding the specific mechanisms that foster and enhance their motivation in both sports and academics. This study utilizes the SDT to provide a detailed exploration of how hope and grit can enhance motivation, thereby potentially improving outcomes in both academic and sports contexts. In light of these insights, this study aimed to investigate the relationship between hope, grit, and motivation of academic and sports of student-athletes. Thus, the current aimed to examine the following hypotheses: i) Agency and pathway is a significant predictor of athletes' motivation towards sports and academics (H_1); ii) COI and POE positively predicts athletes' motivation towards sports and academics (H_2); iii) Grit is a positive predictor of athletes' motivation towards sports and academics (H_3); and iv) Hope is a positive predictor of athletes' motivation towards sports and academics (H_4).

2. METHOD

2.1. Participants

A total of 247 student-athletes from various sports discipline who were enrolled during 1st semester of the academic year 2024-2025 at Mindanao State University-Iligan Institute of Technology (MSU-IIT).

Male athletes comprised of 154 (62.35%) and 93 (37.65%) female with the age range of 18-24 years (M=18.81, SD=1.17). The sample size for this study was determined using the Raosoft sample size calculator, resulting in a calculated size of 306. A total of 282 responses were collected during the data gathering phase. After data cleaning, 247 valid responses were selected for analysis.

Participants were identified using purposive sampling technique. This approach to participant selection is based not on statistical probability, but on subjective assessments of the individual determining which volunteers are likely to yield the most valuable insights [44]. As such, participants were recruited based on the following criteria: i) at least five years of participating in different tournaments; ii) competed regional or national meets in sports; and iii) officially enrolled during the first semester of the academic year 2024-2025.

2.2. Instruments

Grit scale was used to measure athletes' grit. The 12-item scales measured the two components interest (6 items, e.g., "setbacks don't discourage me") and POE (6 items, e.g., I have achieved a goal that took years of work) and participants rated each item using a 5-point Likert scale ranging from 1=not like me at all to 5=very much like me, with a higher score indicate a greater level of grit. Specifically, items 2, 3, 5, 7, 8, and 11 on the COI subscale were reverse-coded. The psychometric properties of the measure are well-established, with Cronbach's alpha scores ranging from .78 to .86 [45], [46]. Cronbach's alpha of COI and POE are .84 and .838 respectively. The overall internal consistency of grit scale is .88.

The hope level of athletes was measured by dispositional hope scale. The scale consists of 12-item including four items for pathways dimensions (e.g., "there are lots of ways around any problem"), four items for agency dimensions (e.g., "I've been pretty successful in life"), and 4 items are fillers. Using an 8-point Likert-type scale ranging from 1=definitely false to 8=definitely true, with a highest score indicating high level of hope. The measure had strong internal reliability estimates to various context [47], [48]. The Cronbach's alpha of Hope scale in this study was .84 for overall, .76 for agency, and .77 for pathways.

The student athletes' motivation toward sports and academics questionnaire (SAMSAQ) was used to assess the college athletes' motivation towards sports and academics. The scale was comprised of 30-item with three different subscales: student athletic motivation (e.g., "It is worth the effort to be an exceptional athlete in my sport"), career athletic motivation (CAM) (e.g., "I am confident that I can be a star performer on my team this year"), and academic motivation (AM) (e.g., "It is important for me to learn what is taught in my courses"), with a responses rated using six-point Likert scale ranging from 1=very strongly disagree to 6=very strongly agree. The higher scores indicating increased level of sport and AM. The SAMSAQ has reported acceptable levels of internal consistency to other studies [10], [22]. The internal consistency of SAMSAQ dimensions such as student athletes' motivation (SAM), CAM, and AM are .86, .83, and .85 respectively. the overall internal consistency of the SAMSAQ is .94.

2.3. Procedure

Before the conduct of the study, authorization was acquired from the school authorities and test administration was conducted after the research ethics review committee of the institution granted its approval. Consent forms were collected from the participants. The questionnaires explicitly delineated the purpose of the research and assured the confidentiality of participants' responses. Under the guidance of assigned researchers, the participants diligently filled out the packet of questionnaires. The researchers confirmed that the participants are qualified athletes from MSU-IIT with experience competing at least at the regional or national levels, as stipulated by the inclusion criteria. The data gathered from this study were quantified according to the items selected by the respondents. Additional risks related to participation in the online survey were enumerated, including potential risks to data privacy due to the digital collection of responses. To address this, strict data protection measures were implemented to secure participant information. Participants were informed of the possibility of minor psychological discomfort from certain questions, as well as their right to withdraw from the study or request a debriefing at any time.

2.4. Data analysis

Table 1 displays the normality test, reliability, and bivariate correlation. The results indicate that the skewness and kurtosis values for all the scales did not meet the specified threshold value of [2, -2]. Thus, it can be assumed that the data set does not adhere to a normal distribution. Additionally, the table presents the results of the reliability test conducted on each scale used in the study. The results showed that all scales demonstrated a strong level of reliability, as indicated by Cronbach's alpha value ranging from .76 to .94. Lastly, the table also displays the bivariate correlations for each scale, revealing a strong correlation between all the scales ($p<.0001$). In addition, linear regression was utilized to analyze the association between dimensions of hope and grit on student-athletes motivation towards academic and sports. For this particular assessment, the study aimed to establish the connection between these variables, regardless of their

underlying structures. Ultimately, the researchers utilized multiple regression analysis to determine the direct influence of athletes' hope and grit in both academic and sport motivation. In this particular modeling approach, various predictors possess the capability to predict a singular target variable [49]. This investigation examines the relationship between student-athletes academic and sports motivation and distinct features of hope and grit of student-athletes.

Table 1. Normality estimates, reliability and bivariate correlation

Variable	1	2	3	4	5	6	7
1. Agency	(.76)						
2. Pathway	.718**	(.77)					
3. COI	.276**	.245**	(.84)				
4. POE	.324**	.333**	.585**	(.83)			
5. CAM	.410**	.380**	.437**	.402**	(.83)		
6. SAM	.499**	.481**	.401**	.513**	.749**	(.85)	
7. AM	.474**	.425**	.543**	.491**	.805**	.827**	(.86)
Mean	24.154	23.789	20.530	22.506	21.595	31.789	69.850
SD	4.499	4.443	4.325	3.977	4.261	5.377	10.936
Skewness	-.323	-.438	.332	.109	-.288	-.421	-.101
Kurtosis	-.150	.387	-.294	-.687	.738	.544	.802

Note: Significant at level *p<.05, ** p<.01

3. RESULTS AND DISCUSSION

The mean, standard deviations, reliability, skewness, kurtosis, and correlation among variables are displayed in Table 1. The results demonstrated that all factors of hope and grit were positively correlated to CAM (r=.38 to .43), AM (r=.40 to .51), and student athletic motivation (r=.42 to .54). Moreover, the skewness and kurtosis values are relatively close to zero, indicating that the data are approximately normal and suitable for parametric statistical analyses.

In Table 2, the findings indicate that all forms of motivation significantly predict both agency and pathways. Firstly, CAM positively predict between agency (β=0.410, t=7.031, p=<.001) and pathways (β=0.425, t=6.437, p=<.001). Hence, 16.8% of the variance in CAM of student-athletes was explained by agency and 14.5% by pathways. Secondly, SAM also showed a positive association between agency (β=0.499, t=9.017, p=<.001) and pathways (β=0.481, t=8.585, p=<.001). The findings suggested that 24.9% of the variance in agency and 23.1% of the variance in pathways was explained by SAM. Furthermore, AM positively predicted both agency (β=0.434, t=8.432, p=<.001) and pathways (β=0.425, t=7.345, p=<.001). Thus, 22.5% of the variance in AM was explained by agency and 42.5% by pathways. Furthermore, the results suggest that the level of motivation towards sports and academics is a powerful predictor of high hope, encompassing both the belief in one's capacity to achieve desired goals and the ability to develop effective plans to goal achievement. Thus, H_1 is accepted.

Table 2. Multiple regression

Variable	CAM			SAM			AM		
	β	R^2	t	β	R^2	t	β	R^2	t
H_1 Agency	.410	.168	7.031**	.499	.249	9.017**	.434	.225	8.432**
H_1 Pathway	.425	.145	6.437**	.481	.231	8.585**	.425	.425	7.345**
H_2 COI	.437	.191	7.596**	.401	.161	6.846**	.543	.295	10.134**
H_2 POE	.402	.161	6.866**	.513	.263	9.346**	.491	.241	8.813**

Note: Significant at level *p<.05, ** p<.01

Additionally, two dimensions of grit showed a significant predictor of student-athletes motivation towards sports and academics. AM showed the strongest predictor of COI (β=.543, t=10.134, p=<.001) explaining 29.5% of the variance. This implies that student-athletes who are academically motivated are more inclined to sustain their interest consistently. SAM (β=.401, t=6.846, p=<.001) and CAM (β=.437, t=7.596, p=<.001) likewise made significant predictions for COI by explaining 16.1% and 19.1% of the variance, respectively. Similarly, POE had shown to be a strong predictor of SAM (β=.513, t=9.346, p=<.001) with 26.3% of the variance explained. Additionally, AM (β=.491, t=8.813, p=<.001) and CAM (β=.402, t=6.866, p=<.001) made a significant prediction for POE with 24.1% and 16.1% of the variance explained, respectively. Thus, H_2 has been accepted.

Consequently, the coefficients were analyzed to determine the extent of the direct influence of grit and hope on the SAMSA, as shown in Table 3. First, an analysis was performed to examine the connection

between grit and the SAMSA. The findings suggest that there is a clear and direct positive impact of grit on SAMSA (F(1,235)=123.561, p=<.001). In this context, H_3 has been accepted. Lastly, the association between hope and SAMSA was also examined. The result showed that hope positively predicted SAMSA (F(1,235)=96.233, p=<.001). Thus, H_4 is accepted. Hence, the results indicate that both grit and hope directly and significantly impacts SAMSA.

Table 3. Linear regression

Hypothesis	Paths	β	R^2	F	p	Decision
H_3	Grit→ SAMSA	.579	.335	123.561	<.001	Accepted
H_4	Hope→ SAMSA	.531	282	96.233	<.001	Accepted

Note: Significant at level *p<.05, **p<.01

The current study aimed to examine whether grit and hope influences SAMSA. The present study offers several interesting results that are worthy of further discussions. The hypothesis proposed that dimensions of grit and hope significantly predict motivation of student-athletes towards sports and academics. The results indicate that both agency and pathways, two dimensions of hope, significantly enhance motivation in sports and academics. Agency, or belief in one's ability to influence outcomes, fosters confidence and persistence, while pathways, the capacity to devise actionable plans, further predicts success [15], [24]. This aligns with research showing that hopeful individuals often outperform peers academically [15]. Providing student-athletes with both agency and pathway skills increases motivation and engagement, supporting their growth in both domains [24], [50]. Furthermore, strong cognitive abilities facilitate resilience by equipping individuals to confront and navigate challenges effectively [15].

In the SDT framework [25], agency fulfills the needs for autonomy and competence by empowering individuals to set and pursue their own goals confidently, thus enhancing motivation. Pathways also support competence by equipping students with strategies to overcome challenges. When students are granted autonomy and a sense of control over their choices, they experience greater intrinsic motivation, boosting engagement in both sports and academics [43]. The findings emphasize the importance of fostering hope, particularly agency and pathways, to boost motivation in sports and academics. Teachers and coaches can support this by providing goal-setting and problem-solving opportunities that enhance students' sense of control, aligning with SDT's focus on autonomy and competence. Structured support, such as mentoring and strategic planning, can help student-athletes create actionable plans for overcoming challenges [43]. Educational institutions should implement frameworks that promote autonomy, self-directed learning, and flexibility in academics and athletics, integrating agency and pathways into curricula to equip students with skills for long-term perseverance and success. These practices, used in both short-term and long-term programs, can drive persistence and performance, supporting students in achieving their goals not only in sports and academics but in broader life pursuits.

The second results indicate that both COI and POE are essential for SAM in sports and academics. COI helps athletes stay committed to their sport or academic path despite distractions, while perseverance enables them to keep pushing through setbacks, enhancing motivation [33], [40]. Perseverant athletes are more likely to persist in training and academics even after failures, building resilience and a sense of accomplishment [37], [41]. This postulates that when athletes have high level of perseverance will likely to increase their motivation in both areas. Student-athletes determination helps overcome obstacles, which leads to modest wins and motivates them to pursue [35]. This perseverance helps student-athletes to stay in sports and in institution, where hard work is essential for long-term success. Thus, grit's persistence of interest and POE motivate student-athletes to overcome hurdles, stay dedicated, and stay focused in sports and academics [30], [41]. From an SDT perspective [25], consistency aligns with the need for autonomy, as it allows students to pursue personally meaningful goals, fostering intrinsic motivation. Perseverance contributes to competence, as overcoming challenges builds confidence. Together, these elements support a sense of self-direction and belief in one's abilities, increasing motivation in sports and academics.

Lastly, both hope and grit are strong predictors of SAM towards sports and academics. According to SDT, grit and hope fulfill students' basic psychological needs for autonomy, competence, and relatedness, motivating student-athletes to play sports [25], [26]. These qualities help internalize, motivation, making sports and academics more self-determined and sustained. Grit, measured by sustained interest and persistence of effort, is line with SDT needs for competence and autonomy. Student-athletes exhibiting heightened levels of grit demonstrate sustained goal orientations (COI) and endure challenges (POE). This continuing effort improves their sense of competence as student-athletes surmount challenges and witness improvements in their sports and academic achievements. Furthermore, grit promotes a sense of autonomy by encompassing self-motivated persistence and goal-directed actions, enabling athletes perceive as having control of their dedication and accomplishments [13], [35].

SAM is primarily intrinsic, grounded in personal goals and values, rather than influence by external pressures [13]. Consequently, hope significantly increases student-athletes' motivation by improving their sense of competence and autonomy. For instance, athletes with higher levels of hope exhibit a sense of agency and demonstrate mental agility by identifying various strategies to attain those goals [22], [24]. This enhances their sense of competence, as they have confidence in their ability to overcome obstacles and achieve success. Furthermore, hope facilitates autonomy, as athletes possessing elevated levels of hope can effectively influence their path by exercising control over their efforts and paths they follow. The combination of hope and grit fosters a motivational environment in which student-athletes experience a sense of competence and autonomy. These results lead to increased motivation, as individuals are propelled by personal objectives and confidence in their own ability. Grit and hope, analyzed through the framework of SDT, are significant predictors of motivation in sports and academics by fulfilling basic psychological needs, thereby enhancing sustained participation and accomplishments.

The findings highlight the importance of fostering grit and hope to enhance SAM in sports and academics. Educational practices and policies should prioritize the development of consistency, perseverance, and agency by creating supportive environments. Institutions can implement flexible academic structures, such as tutoring and deadline adjustments during peak sports seasons, to help athletes balance both domains. Educators and coaches can further support motivation by promoting autonomy and goal-setting that align with students' personal interests. Policies that meet students' psychological needs for autonomy, competence, and relatedness would nurture self-determined motivation, driving sustained engagement and success in both academics and sports.

Although the present study offers novel insights into the ways in which the nature of hope and grit influences the motivation of student-athletes in sports and academics, it is essential to acknowledge its limitations. Firstly, all variables in the study were conducted using self-report measures, which may have introduced a social-desirability bias. Future research might employ social desirability scales to partly control for potential bias in the data analysis. Secondly, the generalizability of the study's results may be limited because the sample exclusively comprises student-athletes, which may not be indicative of other groups such as non-athletes. Additionally, the present study did not account the type of sport, sports achievement, and social supports as moderators or mediators which could potentially affects student-athletes motivation towards sports and academics. Future studies should incorporate these variables to obtain a more comprehensive understanding of the interaction between personal and external influences in shaping motivation in student-athletes.

4. CONCLUSION

This study explored the relationship between hope, grit, and motivation among student-athletes in MSU-IIT, highlighting the significant role these psychological traits play in shaping student-athletes' academic and sport performance. The findings indicate that both hope, specifically agency and pathways, and grit, encompassing COI and POE, are key predictors of motivation. Higher levels of hope and grit significantly enhance motivation, driving student-athletes to engage more actively and persistently in both their academic and athletic pursuits. These insights emphasize the importance of fostering grit and hope in student-athletes to support their overall development and achievement. By fostering a sense of agency, facilitating the development of strategies for success, and promoting sustained effort, SDT offers a valuable framework for enhancing motivation. These results could offer a more comprehensive perspective on the development of motivation, thus, offering significant insights for coaches, educators, and sports psychologist in their effort to enhance the long-term success and well-being of sports athletes. These findings could provide useful perspectives on developing specific methods to improve both academic and athletic motivation.

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C : **C**onceptualization
M : **M**ethodology
So : **So**ftware
Va : **Va**lidation
Fo : **Fo**rmal analysis
I : **I**nvestigation
R : **R**esources
D : **D**ata Curation
O : Writing - **O**riginal Draft
E : Writing - Review & **E**diting
Vi : **Vi**sualization
Su : **Su**pervision
P : **P**roject administration
Fu : **Fu**nding acquisition

CONFLICT OF INTEREST STATEMENT

Authors state no conflict of interest.

DATA AVAILABILITY

The data that support the findings of this study are available from the corresponding author [JCL], upon reasonable request.

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