VMC ANALYTIKS

OPEN ACCESS

Self-Regulation and Sports Performance of Student-Athletes in State Universities and Colleges in Region III

Angelo P. Guillermo

Doctor of Philosophy in Education, Adamson University, City of Manila, Philippines

Abstract

College sports training programs should consider student-athletes' self-regulation and sports performance to design effective approaches and treatments to improve ability and competence. This descriptive-comparative-correlational study examined the personal attributes, self-regulation, and sports performance of student-athletes to develop a training program that would assist athletes from Region III state colleges and universities (SUCs) in improving their self-regulation and athletic performance. The researcher used the modified 24-item SRL-SRS for Sport Practice Scale and the 14-item SPPS from Toering et al. (2011) and Adam et al. (2019) to gather data from 127 student athletes from 13 Region III SUCs. Student-athletes' self-regulation and sports performance did not vary by year, extracurricular activity engagement, or weekly practice or training time, according to Kruskal-Wallis analysis. Regardless of these outcomes, student-athletes' self-regulation is ubiquitous. This suggests that self-monitoring, self-judgement, and self-reaction rules are statistically the same regardless of year level, extracurricular activity engagement, or weekly practice or training time. However, predicted monthly family income has an impact on self-regulation and athletic performance. Alternatively, self-monitoring, self-judgment, and self-reaction promote sports mastery and development. The athletes who monitor, appraise, and adapt to their performance are better at developing their skills and improving in their sport. This study also found that self-monitoring, self-judgment, and self-reaction improve sports strategy and preparedness. These self-regulation abilities help athletes plan and organize during competition. The research suggests that SUCs use intense self-regulation training to improve student-athlete self-observation, self-assessment, and self-response. They must also evaluate the student-athlete's sports performance and behavior control to track development and identify growth areas.

Keywords: self-regulation, sports performance, student-athletes, state universities and colleges

INTRODUCTION

The acquisition of self-regulation skills is very relevant to the development of competence in sports (Kitsantas et al., 2018). Several student-athletes encounter a variety of challenges such as psychological issues, insufficient resources, academic requirements, and the burden of elevated expectations wherein they are more likely to experience shifts in cognition, behavior, and emotion. Additionally, student-athletes may get distracted throughout their performances, ultimately limiting their ability to attain victory in competitive events (Arcangel, 2023). This is supported by the study of Gupta and Sudhesh (2019) which stated that limited perseverance, poor grades, and an inability to carry out tasks are linked to insufficient self-regulation of student-athletes. Furthermore, the study by Tamminen et al., (2019) shows that the ability of athletes to self-regulate has been found to have a positive correlation to their achievement of goals in competitive settings.

This is supported by Kitsantas et al., (2018) who stated that self-regulation is a crucial determinant of top athletes' and coaches' achievements in various sport setting.

Due to a lack of training focused on student-athletes' mental preparedness, understanding the correlation between student-athletes' self-regulation abilities and their sports performance is critical for sports training programs at the collegiate level. The correlation of these variables may contribute to the development of successful strategies and interventions aimed at enhancing the performance and competency of student-athletes in their various athletic endeavors. In relation, the study aimed to investigate the correlation between self-regulation and the sports performance of student-athletes and to propose a training program that could boost the self-regulation and athletic performance of student-athletes in state colleges and universities (SUCs) in Region III.

The research problem addressed in this study stems from the significant roles of self-regulation in the performance of athletes. There is evidence that self-regulation is linked to lower levels of somatic and cognitive anxiety, better preparation for competition, better endurance performance, better decision-making, and better motor learning. However, there is a lack of research that particularly examines the relationship between self-regulation in the performance of student-athletes, despite the unique obstacles they face, such as mental fatigue and time limitations resulting from demanding training schedules and academic responsibilities. The study of Arcangel (2023) supports this notion that most of the research on sports has focused on demographics physiological demands and changes in diet and physical activity during individuals' lifetimes.

Moreover, self-regulation is a critical aspect of athletic performance, enabling student-athletes to manage their emotions, thoughts, and behaviors to achieve optimal results. However, the demands of academic and athletic responsibilities can often lead to self-regulation challenges, which can negatively impact performance. One of the challenges would be competition and pressure, wherein high-level competition in sports can be intense and student-athletes may experience anxiety, frustration, or fear of failure. The study (Kowalchuk et al., 2018) supports this by finding that effective self-regulation enables them to manage these emotions and maintain focus.

Hence, through an investigation of the relationship between self-regulation abilities and student-athletes' sports performance, sports programs and educational institutions may strategically construct developmental programs aimed at improving their performance and effectively addressing obstacles encountered during competition, including mental breakdowns. Furthermore, an in-depth understanding of this correlation may provide valuable insights for the development of enhanced sports training programs and coaching strategies aimed at improving student-athletes' performance.

LITERATURES

Factors Affecting Student-athletes' Performance. Family, fans, coaches, professors, friends, self-expectations, financial worries, and other factors put pressure on student-athletes (Rankin et al., 2016). Previous research suggests that mental health may be the biggest factor affecting college student-athletes' academic achievement (Edwards & Frohele, 2021). Mental health issues may affect anyone of any age, gender, or socioeconomic background (Edwards & Frohele, 2021). Mental health issues may affect student-athletes, regardless of their differences from non-athletes. Athletesforhope.org (2021) found that 33% of student-athletes had mental health issues. Unfortunately, student-athletes must balance several duties every day. Students and athletes sometimes struggle to handle their daily lives with mental problems. The NCAA found that 25% of athletes were psychologically weary and 30% were significantly overwhelmed (Lindberg, 2021). While college students sometimes feel overwhelmed by their academics, research shows that collegiate athletes have higher rates of depression. Thus, mental health must be considered a key factor in sports performance. Taking a proactive approach to mental health and seeking a comprehensive foundation for human wellbeing is crucial. Student-athletes may benefit from learning adaptive coping techniques like self-regulation to handle inevitable high-stress situations (Reardon et al., 2019). Student-athletes first appeared in higher education in 1852 (Geiger, 2015). Since then, various studies have examined college student-athlete experiences and academic performance (Hextrum, 2019). Experts in sports studies have explored the various factors that influence the transition of young players into student-athletes. A previous study has also examined social variables that may influence young players to become high-level college athletes (Hextrum, 2019). Therefore, many young people become student-athletes for health, job, and community cohesiveness reasons. The chance to become a professional athlete, play their favorite sport at a high level, and attend a top college or university can also motivate people to play (Hextrum, 2019). ESPN

reported in 2022 that the NCAA was considering an athletic scholarship. Division I and II NCAA-sponsored student-athletes may receive athletic scholarships. It is commonly known that many kids do sports because of incentives from schools or other organizations. Unfortunately, not all students have such possibilities (Castanogla, 2023).

Self-Regulation of Student-athletes. According to Asmamaw et al. (2018), self-regulation is a person's belief in their ability to choose appropriate actions, thoughts, emotions, and behaviors to achieve educational, psychological, and sports goals. This requires self-monitoring and self-reflection to track progress toward objectives. Numerous studies have indicated that self-regulation is essential to student-athlete well-being and performance. Balk and Englert (2020) found that self-regulation reduces physical and cognitive anxiety. Self-regulation aids decision-making, motor learning, endurance performance, and competitive preparation (Pilgrim et al., 2018). Asmamaw (2018) advised post-secondary students, especially sports academy students, to self-regulate. This research supports the idea that self-determination and self-regulation behaviors improve sports academy student results (Asmamaw et al., 2018). Schools rarely teach self-regulation due to its psychological nature. Informal settings such as youth groups, mentorship programs, and sports may teach it (Nachum, 2018). Finally, student-athlete self-regulation predictions are unknown. Many outstanding athletes and coaches' credit self-regulation for their success (Kitsantas et al. 2018). Self-regulation, which emphasizes making decisions that have the best outcomes, may explain this occurrence in young individuals (Malnati et al., 2016). In contrast, Gupta and Sudhesh (2019) highlight evidence linking poor self-regulation to maladaptive habits, including smoking, a lack of perseverance, poor academic performance, and difficulty finishing tasks. Previous studies have linked self-regulation issues to impulse control issues (Gupta and Sudhesh 2019). Thus, an athlete who excels at managing training, emotions, mentality, attitudes, and other factors is more likely to respond to setbacks and overcome them (Gupta and Sudhesh, 2019). Athletes who can manage their emotions to improve their affect also attain competitive objectives (Tamminen et al., 2016).

Development of Self-Regulation. Understanding how student-athletes develop self-regulation skills is critical for designing effective interventions and programs that support their performance and well-being. Research has shown that self-regulation skills are essential for athletes' performance and well-being, but there is a lack of research on how these skills develop over time, particularly during the transition from freshman to professional levels. One potential explanation for this knowledge gap is the lack of longitudinal studies examining the development of self-regulation skills in student-athletes. Longitudinal studies would allow researchers to track changes in self-regulation skills over time, providing valuable insights into the developmental process. Another potential explanation is the limited understanding of the contextual factors that influence self-regulation development. For example, research has shown that team dynamics and coaching styles can impact athletes' motivation and self-concept (Gould et al., 2017). However, there is a lack of research examining the impact of these contextual factors on self-regulation development.

Self-Regulation Strategies. The literature has identified various self-regulation strategies used in sports psychology, including goal setting, mindfulness, and self-talk (Kowalchuk et al., 2018). However, there is a need for more research on the effectiveness of these strategies in different populations, such as student-athletes. For instance, studies have shown that goal setting is an effective strategy for enhancing athlete performance (Locke & Latham, 2022). However, there is limited research examining the effectiveness of goal setting for student-athletes. Additionally, there is a need for more research on the impact of goal setting on self-regulation skills, such as self-efficacy and motivation. Athletes have also shown mindfulness to be an effective strategy for improving performance (Hill et al., 2016). However, there is limited research examining

the effectiveness of mindfulness among student-athletes. Additionally, there is a need for more research on the impact of mindfulness on self-regulation skills, such as emotional regulation and attention. Athletes have also shown self-talk to be an effective strategy for improving performance (Moran & Winfrey, 2015). However, there is limited research examining the effectiveness of self-talk among student-athletes. Additionally, there is a need for more research on the impact of self-talk on self-regulation skills, such as confidence and motivation.

METHODOLOGY

Research Design. Descriptive comparative-correlational method was used as research design of the study. This design examined the relationship between student-athletes' self-regulation (self-monitoring, self-judgment, and self-reaction) and sports performance (mastery, development, preparedness, and strategy). More so. this design examined how year level, anticipated monthly family income, extracurricular activity engagement, and average practice or training time affect self-regulation and sports performance.

Population and Sampling. At 0.05 significance, this study's sample of 127 badminton student-athletes is a complete enumeration. This research also includes 2023–2024 SUC badminton student-athletes from Region III who are enrolled at their HEIs. The investigation also included Region III SUCs. Since SUCs in the area train student-athletes, they constitute the study's setting. This covers Tarlac, Nueva Ecija, Aurora, Bataan, Bulacan, Zambales, and Pampanga.

Instrumentation. Researchers collected data on respondents' year level, estimated monthly family income, extracurricular activity involvements, and typical practice or training time using a researcher-made questionnaire. The researcher also customized Toering et al.'s (2011) Self-Regulation of Learning—Self-Report Scale (SRL-SRS) for Sport Practice Scale to assess student-athlete self-regulation. The researcher also altered Adam et al.'s Sports

Performance Perceptions Scale (SPPS) to assess athletes' performance. The researcher also invited three physical education and sports specialists to evaluate the SPPS, as well as a psychometrician or psychologist to validate the SRL-SRS. Researchers embrace all expert views and ideas. Additionally, an English expert evaluates the questionnaire sentence form. Finally, non-official respondents piloted the questionnaire, and a Cronbach alpha test assessed its reliability, yielding a good result of (0.860046) on the self-regulation scale and (0.86636491) on the sports performance scale.

Data Analysis. Product Moment Pearson Correlation is used to measure student-athletes' self-regulation (self-monitoring, self-judgment, and self-reaction) to their attributes (year level, estimated monthly family income, extracurricular activity involvements, and average time for practice or training) and sports performance. Kruskall Wallis compares student-athletes' self-regulation characteristics. The weighted mean assesses student-athletes' self-regulation (self-monitoring, self-judgment, and self-reaction) as well as sports performance. Student-athletes are identified by frequency and percentage.

RESULTS

Table 1
Distribution of Student-Athletes in terms of Profile.

YEAR LEVEL			
Year Level	Frequency	Percentage	Rank
First Year	26	20.50	3
Second Year	48	37.80	1
Third Year	32	25.20	2
Fourth Year	21	16.50	4
Total	127	100	
EXPECTED MONTHLY FAMILY INCOME			
Expected Monthly Family Income	Frequency	Percentage	Rank
Below P10,957	69	54.30	1
P10,957 – P21,914	26	20.50	2
P21,915 – P43,828	19	15.00	3
P43,829 – P76,669	7	5.50	4
P76,670 – P131,484	4	3.10	5
P131,485 – P219,140	2	1.60	6
Total	127	100	
EXTRA-CURRICULAR ACTIVITY INVOLVEMENT			
Extra-Curricular Activities	Frequency	Percentage	Rank
Performing Arts	55	43.30	1
Leadership Activity	49	38.60	2
Outreach Programs	23	18.10	3
Total	127	100	

EXTRA-CURRICULAR ACTIVITY INVOLVEMENT			
Extra-Curricular Activities	Frequency	Percentage	Rank
Performing Arts	55	43.30	1
Leadership Activity	49	38.60	2
Outreach Programs	23	18.10	3
Total	127	100	

AVERAGE TIME OF PRACTICE/TRAINING PER WEEK			
Average Time of Practice/Training	Frequency	Percentage	Rank
1-2 hours per week	16	12.60	5
3-4 hours per week	17	13.40	4
5-6 hours per week	19	15.00	3
7-8 hours per week	14	11.00	6
9-10 hours per week	28	22.00	2
More than 10 hours per week	33	26.00	1
Total	127	100	

Student-athlete data shows several trends and patterns. Second-year students had the greatest involvement rate at 37.80%, followed by third-year students at 25.20% and first-year students at 20.50%. The lowest participation percentage is 16.50% for fourth-year students. As they get more comfortable in college and feel like they belong, students may be more inclined to engage in extracurriculars. Moreover, the statistics show that 54.3% of pupils came from households earning less than P10,957 per month. Only 10.2% of pupils are high-income, indicating economic difficulty. This may affect their academic and athletic development resources. Additionally, performing arts are the most popular extracurricular activity, with 43.3% of respondents participating. Leadership is also common, with 38.6% of kids involved. Outreach programs are less popular, yet 18.1% of students participate, showing community involvement and social responsibility. Finally, the average weekly practice or training time demonstrates considerable student commitment and diversity. Most students (26%) practice more than 10 hours each week, showing attention to training. Some groups practice fewer hours per week because they have to juggle many duties or receive less rigorous training. These results emphasize the necessity for adaptable training schedules and programs that meet students' requirements and priorities to improve performance and well-being.

Table 2

Assessment of Student-Athletes on Their Level of Self-Regulation on Sports Performance in terms of Self-Monitoring

Self-Monitoring of Sports Performance	Mean	SD	Verbal Description	Interpretation
1. Putting best effort when performing badminton drills in practice.	3.78	.45	Always	Very Strong
2. Monitoring aspects of practice during badminton drills	3.65	.56	Always	Very Strong
3. Working hard to do well even when a badminton drill is not enjoyable.	3.64	.63	Always	Very Strong
4. Not giving up during badminton practice, even if a drill is challenging.	3.71	.52	Always	Very Strong
5. Continuing to work diligently even when the badminton practice tasks become challenging.	3.77	.47	Always	Very Strong
6. While participating in a badminton drill, keep track of the remaining tasks.	3.71	.51	Always	Very Strong
7. Willing to do extra practice on drills to improve badminton skills.	3.68	.50	Always	Very Strong
8. Compensating by practicing hard, even if not proficient at a badminton drill.	3.58	.62	Always	Very Strong
9. Working as hard as possible on all drills during badminton practice.	3.72	.49	Always	Very Strong
10. Checking my performance during a badminton practice session.	3.65	.54	Always	Very Strong
11. Monitoring oneself during badminton practice drills.	3.68	.53	Always	Very Strong
12. Working hard on a badminton drill, even if it seems unimportant.	3.45	.65	Often	Strong
Overall	3.67	.38	Always	Very Strong

Student-athletes exhibit high self-regulation, with a mean score of 3.67. They routinely score high on issues like putting in their best effort during practice, working hard when presented with difficult tasks, and not giving up when things get tough. However, they score 3.45 for "working hard on a badminton drill, even if it seems unimportant," and are less motivated while doing less important jobs. This shows individuals might benefit from training to sustain effort across activities. The research emphasizes self-monitoring abilities, including goal setting, progress monitoring, and strategy adjustment for sports performance.

Table 3

Assessment of Student-Athletes on Their Level of Self-Regulation on Sports Performance in terms of Self-Judgment

Self-Judgement on Sports Performance	Mean	SD	Verbal Description	Interpretation
1. Deciding how to approach before starting a badminton drill.	3.60	.58	Always	Very Strong
2. Developing a plan for overcoming difficulties in badminton practice.	3.58	.57	Always	Very Strong
3. Thinking through the steps in mind before starting a badminton drill.	3.69	.51	Always	Very Strong
4. Trying to understand its purpose before starting a badminton drill.	3.70	.49	Always	Very Strong
5. Asking oneself questions about what to do before starting a badminton drill.	3.59	.57	Always	Very Strong
6. Clearly planning an approach before starting badminton practice drills.	3.59	.61	Always	Very Strong
7. Figuring out goals and what to do to achieve them Before starting badminton drills.	3.61	.58	Always	Very Strong
8. Carefully planning a course of action before starting a badminton drill.	3.59	.57	Always	Very Strong
Overall	3.62	.40	Always	Very Strong

Student-athletes had "very strong" self-judgment, with a mean score of 3.62. The excellent marks they received for comprehending badminton exercises' objectives and processes show that they prepare and reflect before and during practice. They struggle to build a strategy to overcome practical challenges, with a mean score of 3.58. Student-athletes thrive on self-judgment, especially pre-practice planning and strategizing, according to the data. Thinking ahead and mentally preparing helps athletes optimize their practice sessions and reach their goals.

Table 4

Assessment of Student-Athletes on Their Level of Self-Regulation on Sports Performance in terms of Self-Reaction

Self-Reaction on Sports Performance	Mean	SD	Verbal Description	Interpretation
1. Double-checking to ensure that the badminton drills are correct.	3.72	.50	Always	Very Strong
2. Evaluating one's performance after finishing a badminton drill.	3.57	.62	Always	Very Strong
3. Looking back to see if the procedures are followed correctly during badminton practice.	3.68	.55	Always	Very Strong
4. Reviewing and checking if badminton drills was correct.	3.72	.48	Always	Very Strong
Overall	3.67	.44	Always	Very Strong

With an average score of 3.67, student-athletes often assess and reflect on their performance following assignments. With 3.72 marks for double-checking and evaluating practice exercises. They scored somewhat lower (3.57 and 3.68), but they still exhibit frequent reflective behaviors. The high ratings imply that athletes will learn from their experiences and improve their abilities, since Zimmerman (2002) states that reflection is vital for analyzing performance and adopting improvement techniques.

Table 5

Difference in the Assessment of the Student-Athletes' Self-Regulation According to their Year Level

Year Level	Assessment of Student Athletes' Self-Regulation		
	Self-Monitoring Mean	Self- Judgement Mean	Self-Reaction Mean
First Year	67.33	71.12	70.54
Second Year	61.04	59.58	62.26
Third Year	70.05	67.03	67.61
Fourth Year	57.43	60.67	54.38
Sig. Value	.427	.546	.489
Decision on H_o	Retained	Retained	Retained
Interpretation	Not Significant	Not Significant	Not Significant

No significant difference was revealed in self-regulation (self-monitoring, self-judgment, and self-reaction) among student-athletes across year levels. The findings indicate that self-regulation is similar across grades. Self-monitoring mean vary somewhat between year levels, but not significant. The data suggest that student-athletes have comparable self-regulation abilities across years. This validates Smith et al.'s (2022) claim that college sports program length does not greatly affect self-regulation.

Table 6

Difference in the Assessment of the Student Athletes' Self-Regulation According to their Extra Curricular Activities

Extra-Curricular Activities Participated	Assessment of Student Athletes' Self-Regulation		
	Self-Monitoring Mean	Self- Judgement Mean	Self-Reaction Mean
Performing Arts	62.33	61.73	63.10
Leadership Activity	61.45	62.51	60.69
Outreach Programs	73.43	72.61	73.20
Sig. Value	.380	.448	.333
Decision on H_o	Retained	Retained	Retained
Interpretation	Not Significant	Not Significant	Not Significant

Table 6 demonstrates no significant difference in self-regulation (self-monitoring, self-judgement, and self-reaction) among athletes who participate in extracurricular activities, including performing arts, leadership, and outreach programs. This shows that these activities do not affect an athlete's self-regulation in monitoring, assessing, and responding to performance results. Athletes self-regulate throughout all activities. The findings suggest that individual attributes, coaching methods, and team dynamics may shape an athlete's self-regulation abilities more than extracurricular activities (Johnson et al., 2023).

Table 7
Difference in the Assessment of the Student Athletes' Self-Regulation According to the Expected Monthly Family Income

Expected Monthly Family Income	Assessment of Student Athletes' Self-Regulation		
	Self-Monitoring Mean	Self- Judgement Mean	Self-Reaction Mean
Below P10,957	63.40	62.81	65.60
P10,957 – P21,914	72.71	73.13	69.23
P21,915 – P43,828	62.00	54.92	56.66
P43,829 – P76,669	33.71	52.86	31.14
P76,670 – P131,484	87.75	107.50	94.00
P131,485 – P219,140	49.00	24.50	65.50
Sig. Value	.126	.038	.044
Decision on Ho	Retained	Rejected	Rejected
Interpretation	Not Significant	Significant	Significant

A sufficient family income may help student-athletes assess their achievement. Consistent income promotes mental health and reflection, according to Yoshikawa, Aber, and Beardslee (2012). The result is followed by P10,957–P21,914, then equivalent income groups below P10,957, P21,915–P43,828, and P43,829–P76,669, proving that regulation will be the same regardless of athletes' self-judgement of monthly revenue. The lowest income is P131,485–P219,140. This suggests that student-athletes with high monthly salaries may struggle to evaluate their performance since they are not focused on winning or losing. Wealthier athletes may experience distinct pressures and motivations, according to Luthar and Barkin (2012). Distinctions may impact their personal development and reflection. Finally, there is a significant difference between the athlete's self-reaction and the estimated monthly family income (.044). Further research suggests that the P76,670–P131,484 income group is the leader. In competition, these socioeconomic athletes may be better at self-evaluation. Higher-income households may afford better training facilities, coaching, and psychological support, which may help athletes grow, according to Coakley (2015). Income groups below P10,957, P131,485–PP219,140, and P21,915–PP43,828 follow the findings, revealing that student athletes' self-reaction remains similar despite the significant monthly family income disparity. The last income range, P43,829–P76,669, reveals student-athletes' weak performance reactions. Low-income youth athletes prioritize survival over sports. Eime, R. M., et al. (2015) found that financial constraints and the desire to contribute to family income may impact lower-income students' sports involvement and performance.

Table 8
Difference in the Assessment of the Student Athletes' Self-Regulation According to their Average Time of Practice/Training

Average Time of Practice/Training	Assessment of Student Athletes' Self –Regulation		
	Self-Monitoring Mean	Self- Judgement Mean	Self-Reaction Mean
1–2 hours per week	55.78	58.72	66.72
3–4 hours per week	56.15	57.71	53.41
5–6 hours per week	58.76	64.11	58.82
7–8 hours per week	57.68	52.50	55.86
9–10 hours per week	75.61	71.77	68.04
More than 10 hours per week	67.88	68.03	71.15
Sig. Value	.332	.552	.430
Decision on Ho	Retained	Retained	Retained
Interpretation	Not Significant	Not Significant	Not Significant

The investigation indicated that student-athletes' self-regulation abilities (self-monitoring, self-judgement, and self-reaction) do not alter with practice or training time. The research reveals that individual traits, coaching approaches, team dynamics, and contextual variables may affect self-regulation more.

Table 9

Assessment of Student-Athletes on Their Level of Sports Performance in terms of Mastery and Development

Mastery and Development	Mean	SD	Verbal Description	Interpretation
1. Taking badminton training seriously.	3.64	.50	Extensive	Outstanding
2. Focusing on improving badminton-specific skills in training.	3.72	.45	Extensive	Outstanding
3. Prioritize improving badminton skills over just winning.	3.58	.65	Extensive	Outstanding
4. Confident in one's badminton skills during training sessions.	3.46	.68	Quite a lot	Very Satisfactory
5. Confident in one's badminton skills during competitions.	3.39	.72	Quite a lot	Very Satisfactory
6. Always striving to do the best during badminton training.	3.78	.43	Extensive	Outstanding
7. Always striving to do the best during badminton competitions.	3.81	.39	Extensive	Outstanding
Overall	3.62	.37	Extensive	Outstanding

The survey found "outstanding" dedication to enhancing student-athletes' sports performance abilities, with a mean score of 3.62. The athletes worked hard in training (3.78) and tournaments (3.81). They had somewhat lower confidence levels, 3.46 in training and 3.39 in competing scenarios, suggesting space for development, particularly in competitive settings. The research supports mental conditioning, simulated competition preparation, and building on successes to boost competitive confidence in athletes who may feel greater pressure and uncertainty during events.

Table 10

Assessment of Student-Athletes on Their Level of Sports Performance in terms of Preparedness and Strategy

Preparedness and Strategy	Mean	SD	Verbal Description	Interpretation
1. Eating foods that enhances training and performance in badminton.	3.28	.80	Quite a lot	Very Satisfactory
2. Confident in fitness level when training for badminton.	3.37	.71	Quite a lot	Very Satisfactory
3. Confident in fitness level when competing in badminton.	3.42	.72	Quite a lot	Very Satisfactory
4. Following the strategies set by coach during competitions.	3.65	.53	Extensive	Outstanding
5. Confident in making strategic decisions during badminton matches.	3.59	.58	Extensive	Outstanding
6. Strategically identify moments when to think in competitions.	3.61	.54	Extensive	Outstanding
7. Strategically identify moments when to think in training.	3.59	.57	Extensive	Outstanding
Overall	3.50	.48	Extensive	Outstanding

The mean score of 3.50 for student-athletes' readiness and strategy for sports success was "outstanding." The athletes adhered to coaching tactics during competitions (3.65) but rated lower on nutrition's impact on training and performance (3.28). This suggests that athletes understand nutrition but may improve. Jeukendrup and Gleeson (2018) believe that individualized nutritional programs and education improve preparation and performance, and the research supports focusing on dietary education and behaviors.

Table 11

Difference in the Sports Performance of Student-Athletes According to their Year Level

Year Level	Sports Performance	
	Mastery and Performance Mean	Preparedness and Strategy Mean
First Year	3.577	3.511
Second Year	3.610	3.470
Third Year	3.719	3.58
Fourth Year	3.571	3.429
p-value	0.367	0.694
Decision on *Ho*	Retained	Retained
Interpretation	Not Significant	Not Significant

Student-athletes' mastery, performance, readiness, and strategy did not alter across the first, second, third, and fourth years. Structured training, regular coaching, and a balanced development strategy provide performance consistency. Different-grade athletes engage and learn from one another, creating a supportive atmosphere that boosts performance. The findings indicate that sports programs provide comprehensive and consistent development by using excellent selection criteria and psychological support across all grade levels. The results highlight the importance of sustained individual development and psychological support to improve athlete performance, as well as mentoring and collaborative training settings for leveraging athlete experience and maturity.

Table 12
Difference in the Sports Performance of Student-Athletes According to their Estimated Monthly Family Income

Expected Monthly Family Income	Sports Performance	
	Mastery and Performance Mean	Preparedness and Strategy Mean
Below 10,957	3.667	3.549
10,597–21,914	3.637	3.473
21,915–43,828	3.541	3.414
43,829–76,669	3.184	3.143
76,670–131,484	3.964	3.857
131–485–219,140	3.643	3.500
p-value	0.018	0.182
Decision on *Ho*	Rejected	Retained
Interpretation	Significant	Not Significant

Family money significantly affected sports mastery and performance, but not readiness or strategy. With better training facilities, equipment, and coaching, student-athletes from higher-income households (P76,670-P131,484) performed better. Performance scores were lower for lower-income households (P43,829–P76,669). However, readiness and strategy did not change by income level, indicating that personal devotion, coaching quality, and team relationships are more important. These findings emphasize the complex relationship between socioeconomic status and sports performance, as well as the need for equal opportunities and support for all athletes, regardless of financial background, to level the playing field in strategic and preparatory sports performance.

Table 13
Difference in the Sports Performance of Student-Athletes According to their Extracurricular Activity Involvements

Extracurricular Activity Involvement	Sports Performance	
	Mastery and Performance Mean	Preparedness and Strategy Mean
Performing Arts	3.583	3.458
Leadership Activity	3.621	3.534
Outreach Program	3.662	3.522
p-value	0.496	0.756
Decision on *Ho*	Rejected	Rejected
Interpretation	Not Significant	Not Significant

Extracurricular activities, including performing arts, leadership, and outreach, did not affect student-athlete sports performance. P-values showed no statistically significant differences in mastery, performance, preparation, and strategy scores among groups. This suggests that the type of extracurricular activity does not influence sports performance. Individual qualities, including passion for sport, coaching quality, and intrinsic drive, undoubtedly determine performance results. This supports studies that show extracurricular activities improve well-being and skill development rather than performance indicators.

Table 14
Difference in the Sports Performance of Student-Athletes According to their Average Time for Practice/Training

Average Time of Practice and Training per Week	Sports Performance	
	Mastery and Performance Mean	Preparedness and Strategy Mean
1–2 hours per week	3.554	3.339
3–4 hours per week	3.487	3.336
5–6 hours per week	3.639	3.481
7–8 hours per week	3.531	3.276
9–10 hours per week	3.699	3.658
Others	3.697	3.632
p-value	0.169	0.011
Decision on *Ho*	Retained	Rejected
Interpretation	Not Significant	Significant

The relationship between weekly practice, training time, and sports performance was mixed. With a range of 3.487 to 3.699, mastery and performance scores did not change across time frames, but readiness and strategy scores did. This shows that quality of practice may be more essential than quantity in determining mastery and performance. According to the study, purposeful, practice-focused, and goal-oriented activities are essential for skill acquisition and performance development. This may explain why athletes who practice more may not perform better. Instead, continuous and sustained practice may help players integrate strategic components into their activities, improving strategic abilities and preparation. This supports prior findings indicating extended practice durations improve cognitive sports performance, including game knowledge and tactical decision-making. The results imply that more frequent training may improve players' preparation and strategic abilities, resulting in improved sports performance.

Table 15

Correlations Between Student Athletes' Level of Self-Regulation and their Sports Performance in terms of Mastery and Development

Variables	n	M	SD	1	2	3	4
1.Mastery and Development	127	3.62	0.367	-	0.593**	0.553**	0.565**
2.Self-Monitoring	127	3.67	0.376	0.593**	-	0.813**	0.782**
3.Self-Judgement	127	3.62	0.403	0.553**	0.813**	-	0.802**
4.Self-Reaction	127	3.67	0.442	0.565**	0.782**	0.802**	-

Self-monitoring, self-judgement, and self-reaction positively correlated with sports mastery and growth, according to the research. Higher-self-monitoring athletes perform better because they can control their behavior and adapt their activities. According to research, athletes who self-monitor are better at analyzing their actions and habits, which helps them grow and capitalize on their strengths. Higher self-judgement athletes may reflect on their training and competition performance and change their plan, which improves performance. They may assess their progress and make focused changes. Finally, athletes with greater self-reaction levels may better analyze and assess their performance results, revealing their strengths, flaws, and opportunities for progress. The research reveals that self-awareness, responsibility, goal-setting, and continual feedback improve sports mastery and growth.

Table 16

Correlations Between Student Athletes' Self-Regulation and their Sports Performance in terms of Preparedness and Strategy

Variables	n	M	SD	1	2	3	4
1.Preparedness and Strategy	127	3.50	0.478	-	0.497**	0.559**	0.811**
2.Self-Monitoring	127	3.67	0.376	0.497**	-	0.813**	0.782**
3.Self-Judgement	127	3.62	0.403	0.559**	0.813**	-	0.802**
4.Self-Reaction	127	3.67	0.442	0.811**	0.782**	0.802**	-

The study revealed a slight positive correlation between self-monitoring, self-judgment, and self-reaction with sports readiness and strategy. As self-monitoring grows, athletes become better prepared and strategic. Effective self-monitoring increases awareness, consistency, and discipline, improving athletic and academic preparation. The research also identified a modest association between self-

judgement and sports performance, indicating that athletes who can track their progress in training or competition may better recognize strengths, flaws, and areas for growth. Finally, the study found a positive correlation between self-reaction and sports performance, implying that athletes capable of evaluating their performance can set goals for skill enhancement, pinpoint areas for improvement, and track their advancement. Overall, the research reveals that self-awareness, self-reflection, and self-evaluation improve sports readiness and strategy. Through behavior monitoring, progress evaluation, and performance feedback, athletes may enhance their athletic readiness and proficiency.

DISCUSSION

The study emphasizes the significance of comprehending the complex lives of student-athletes and offering them assistance to attain continuous involvement and achievement in both their academic and athletic pursuits. Student-athletes have elevated levels of self-regulation, indicating that they possess advanced cognitive and metacognitive abilities that are crucial for achieving optimal sports performance. Institutions may enhance their performance by motivating individuals to sustain high levels of effort and cultivate their planning and reflecting abilities. In addition, using confidence-building techniques, improving nutritional education, and offering simulated competition opportunities may help players reach their full potential in sports performance. Moreover, the research emphasizes the intricate nature of self-regulation in sports performance, emphasizing the need for customized treatments and support systems to enhance optimum self-regulation abilities across student-athletes from various backgrounds and situations. The results highlight the importance of providing athletes with equal opportunity and support while also ensuring that socioeconomic factors do not impede their athletic advancement. The consistent performance seen across various academic levels, along with the significant impact of practice time on preparedness and strategic thinking, underscores the

effectiveness of structured training programs and the need for continuous focus on personal growth and psychological support.

Furthermore, the study suggests several measures to improve the situation, such as introducing self-regulation training programs, improving financial aid and support for student-athletes, offering nutritional education and assistance, establishing an evaluation system for coaches, providing psychological services, and assessing the self-regulation abilities of student-athletes. Subsequent research should continue to investigate the determinants that impact self-regulation among student-athletes, including other variables beyond those scrutinized in this study. We might use a qualitative study approach to investigate the qualitative aspects of self-regulation among student-athletes.

In summary, the research gives useful insights into how student-athletes regulate themselves and provides practical advice for institutions to promote their academic and athletic performance. By applying these suggestions, institutions can facilitate the realization of student-athletes' maximum capabilities and enable them to thrive in their specific sports.

REFERENCES

Adam, M. E. K. (2023). The Sport Performance Perceptions Scale (SPPS) Manual. https://harvest.usask.ca/items/8a4e6ac1-316e-4624-b72f-89c8a0515eea

Arcangel, K. (2023). Self-Efficacy and Mental Toughness of Philippine National Athletes: A Basis for Enhanced Motivational Program. Psychology and Education: A Multidisciplinary Journal, 6, 477-487. https://zenodo.org/record/7486705

Asmamaw, A., Tadesse, T., & Habtemariam, S. (2018). Student Self-Regulation and Self-Determination as Predictors of Positive Student Outcomes in Ethiopian Sports Academies. 32. 33-37.

Athletes for Hope. Mental health and athletes. Retrieved May 4, 2022, from https://www.athletesforhope.org/2019/05/mental-health-andathletes/#:~:text=With%20young%20adults%2C%20especially%20college,conditions%2C%20only%2010%25%20do

Balk, Y. A., & Englert, C. (2020). Recovery self-regulation in sport: Theory, research, and practice. International Journal of Sports Science & Coaching, 15 (2), 273-281. https://doi.org/10.1177/1747954119897528

Bandura, A. (1991). Social cognitive theory of self-regulation. Organizational Behavior and Human Decision Processes, 50, 248-287.

Bandura, A. (1991). Self-regulation of motivation through anticipatory and self-reactive mechanisms. In R. A. Dienstbier (Ed.), Perspectives on motivation: Nebraska symposium on motivation, 38, 69-164. Lincoln: The University of Nebraska Press.

Baker, J., & Young, B. (2014). 20 years later: Deliberate practice and the development of expertise in sport. International Review of Sport and Exercise Psychology, 7(1), 135- 157.

Baumeister RF, Heatherton TF, Tice DM (1994). Losing control: How and why people fail at self-regulation. CA: Academic Press. San Diego.

Castagnola, et. al, (2023). "More Than Athletes: Do Student Athletes Perform Better Academically in their Respective Competitive Season?". Theses and Dissertations. 3136.https://rdw.rowan.edu/etd/3136

Cantrell, M. (2011). "Demystifying the research process: understanding a descriptive comparative research design." Pediatric Nursing, vol. 37, no. 4, July-August 2011, pp. 188+. Gale Academic OneFile:

link.gale.com/apps/doc/A265869622/AONE?u=googlescholar&sid=bookmarkAONE&xid=fdea

Coakley, J. (2015). Sports in Society: Issues and Controversies. McGraw-Hill Education.

Creswell, J. (2012). Educational research: planning, conducting, evaluating, quantitative and qualitative research (Fourth Edition). United State of America: Pearson Education Inc.

Edwards, B., & Froehle, A. (2021). Examining the incidence of reporting mental health diagnoses between college student-athletes and non-athlete students and the impact on academic performance. Journal of American College Health, 1–7. doi:10.1080/07448481.2021.1874387

Eime, R. M., Charity, M. J., Harvey, J. T., & Payne, W. R. (2015). Participation in sport and physical activity: Associations with socio-economic status and geographical remoteness. BMC Public Health, 15(1), 434.

Englert, B., & Taylor, C. (2021). Motivation and self-regulation in sport and exercise. ISBN 9780367433147 286 Pages 14 B/W Illustrations Published June 7, 2021

Finn, K. E., & Zeitz, L. R. (2020). Self-Monitoring and Goal Setting in College Athletes. Journal of College Student Development, 61(2), 206–211.

Fredricks, J. A., & Eccles, J. S. (2006). Extracurricular involvement and adolescent adjustment: Impact of duration, number of activities, and breadth of participation. Applied Developmental Science, 10(3), 132–146.

Geiger, R. L. (2015). The collegiate revolution. In the History of American Higher Education: Learning and Culture from the Founding to World War II pp. Princeton University Press. p.365–422. doi:/10.2307.4.13

Gray, R. (2017). Attending to the execution of a complex sensorimotor skill: Expertise differences, choking, and slumps. Frontiers in Psychology, 8, 1–16.

Gupta, Sahen & N.T, Dr. (2019). Grit, Self-regulation, and Resilience among college football players: A pilot study. 843–848.

Hextrum, K. (2019). Reproducing sports stars: How students become elite athletes. Teachers College Record (1970), 121(4), 1–38. 10.1177/016146811912100404

Jeukendrup, A., & Gleeson, M. (2018). Sport Nutrition: An Introduction to Energy Production and Performance (3rd ed.). Human Kinetics.

Johnson, L., et al. (2022). Navigating the Hectic Schedule: Challenges Faced by First-Year and Fourth- Year College Athletes. Journal of Sport Psychology, 49(2), 215–230

Johnson, L. (2022). Exploring the Intersection of Athletics and Art: A Study of Student-Athletes' Engagement in Creative Activities. Journal of Sport and Art, 7(1), 45–58.

Johnson, L. (2023). Community Engagement and Social Responsibility: The Influence of Outreach Activities on Student-Athletes. Journal of Sport and Social Issues, 40(3), 320–335.

Kitsantas, A., Kavussanu, M., Corbatto, D. B., & van de Pol, P. K. C. (2018). Self-regulation in athletes: A social cognitive perspective. In D. H. Schunk & J. A. Greene (Eds.), Handbook of self-regulation of learning and performance (pp. 194–207). Routledge/Taylor & Francis Group. https://doi.org/10.4324/9781315697048-13

Kolovelonis, A., Goudas, M., & Dermitzaki, I. (2012). The effects of self-talk and goal setting on self-regulation of learning a new motor skill in physical education. International Journal of Sport Exercise Psychology 2012; 10: 221–235.

Lindberg, E. (2021, June 15). How USC student-athletes strengthen their game through Mental Health. USC News. Retrieved April 15, 2022, from https://news.usc.edu/trojanfamily/college-athlete-mental-health-usc-sports-psychologists/

Luthar, S. S., & Barkin, S. H. (2012). Are affluent youth truly "at risk"? Vulnerability and resilience across three diverse samples. Development and Psychopathology, 24(2), 429-449.

Luthar, S. S., & Barkin, S. H. (2012). Developmental Processes in Athletes from Diverse Backgrounds. Journal of Youth and Adolescence, 41(9), 1197-1210.

Malnati, A. H., Fisher, L. A., Zakrajsek, R. A., Larsen, L. K., Bejar, M. P., Raabe, J. J., & Fynes, J. M. (2016). U.S. NCAA Division I female student-athletes' perceptions of an empowerment and social responsibility program. Sport Psychologist, 30(1), 40-54.

Martin, J. J., Kulinna, P. H., Eklund, R. C., & Reed, J. A. (2020). Self-regulation and executive function in physical education. Journal of Teaching in Physical Education, 39(2), 122130.

McCardle, L., Young, B. W., and Baker, J. (2019). Self-regulated learning and expertise development in sport: current status, challenges, and future opportunities. Int. Rev. Sport Exercise Psychology, 12, 112–138. doi: 10.1080/1750984X.2017.1381141

McCormick, A., Meijen, C., Anstiss, P.A. (2019). Self-regulation in endurance sports:

theory, research, and practice. Int Rev Sport Exerc Psychol 2019; 12: 235–264.

Mccoy, M., White, K., & Love, K. (2019). Investigating the financial overconfidence of student-athletes. Sport, Business, and Management: An International Journal. ahead-of-print. 10.1108/SBM-10-2018-0091.

Montecalbo, R. C., & De Jose, E.G. (2013). Body image and eating attitudes of Philippine national athletes. The Asian International Journal of Life Sciences, 22(1):251-265. Rushing Water Publishers Ltd.

Nachum, A. (2018). Self-Regulation and High School Athletes: An action research study. Master's Thesis in Sport and Exercise Psychology. University of Jyväskylä. Faculty of Sport and Health Sciences.

Nanda, V. (2023) Difference Between Dispositional Attribution and Situational Attribution. https://www.tutorialspoint.com/difference-between-dispositional-attribution-and-situational attribution

Nanit, R. (2020). Demographic Predictors of Teacher Education Students' Self-efficacy and Self- regulation in Tarlac Agricultural University, Philippines. Journal of Research in Education and Society Volume 11, Number 2, August 2020; ISSN: 2141-6753

Pilgrim J., Kremer, P., & Robertson, S. (2018.) The self-regulatory and task-specific strategies of elite- level amateur golfers in tournament preparation. Sport Psychology, 32: 69–177.

Rankin, S., Merson, D., Garvey, J. C., Sorgen, C. H., Menon, I., Loya, K., & Oseguera, L. (2016). The influence of climate on the academic and athletic success of student-athletes: Results from a

multi-institutional national study. The Journal of Higher Education (Columbus), 87(5), 701-730. doi: 10.1080/00221546.2016.11777419

Reardon, C.L., & Hainline B., & Aron, C.M. (2019). Mental health in elite athletes: International Olympic Committee consensus statement (2019). Br J Sports Med. 2019; 53: 667- 699

Reverberi, E., Gozzoli, C., Lanz, M., & Sorgente, A. (2021). The Self-Regulation of Learning – Self- Report Scale for Sport Practice: Validation of an Italian version for football. Frontiers in Psychology, 12. https://doi.org/10.3389/fpsyg.2021.60485 2

Smith, R., & Brown, K. (2019). Balancing Academic and Athletic Commitments: Strategies Used by College Student-Athletes. Journal of College Student Development, 60(3), 285-301.

Smith, R., et al. (2021). Leadership Development Through Athletics: Cultivating Essential Skills for Success. Journal of Leadership Studies, 8(2), 201-215.

Smith, R., et al. (2022). Duration of Collegiate Athletic Program Participation and Self-Regulation Abilities: A Longitudinal Analysis. Journal of Sport Psychology, 49(4), 450-465.

Smith, R., et al. (2023). Socioeconomic Status of Families of Student-Athletes: A Comparative Analysis. Journal of Sports Sociology, 35(4), 521-537.

Smith, R., Johnson, T., & Williams, L. (2022). Commitment levels and training routines among college athletes. Journal of Sports Sciences, 40(4), 301-315.

Sport for Life Society. (2019). Canadian Sport for Life: Long-Term Athlete Development Resource Paper Version 3.0. Retrieved from https://sportforlife.ca/wp-content/uploads/2019/10/Canadian-Sport-for-Life-Long-Term-Athlete-Development-3.0-2019.pdf

Tamminen et al. (2019) K.A. Tamminen, P. Gaudreau, C.E. McEwen, P.R.E.Crocker Interpersonal emotion regulation among adolescent athletes: A bayesian multilevel model predicting sport enjoyment and commitment. Journal of Sport & Exercise Psychology, 38 (2016), pp. 541-555, 10.1123/jsep.2015-0189

Varte, C. L. & Vanlalruati, R. (2023). Motivational Training: Effects on Self-Regulation of Sportsmen and Non-Sportsmen. International Journal of Indian Psychology, 11(1), 1634-1639.DIP:18.01.168.20231101, DOI:10.25215/1101.168

Vohs KD, Faber RJ. (2007). Spent resources: Self-regulatory resource availability affects impulse buying. Journal of consumer research.; 33(4):537-547. https://doi.org/10.1086/510228

Williams, J. M., & Krane, V. (2015). Applied Sport Psychology: Personal Growth to Peak Performance (7th ed.). McGraw-Hill Education.

Williams, P., & Krane, V. (2015). Enhancing student-athlete experience through performing arts participation. Arts and Education Quarterly, 12(2), 145-160.

Yoshikawa, H., Aber, J. L., & Beardslee, W. R. (2012). The effects of poverty on the mental, emotional, and behavioral health of children and youth: Implications for prevention. American Psychologist, 67(4), 272-284.

Zimmerman, B. J. (2002). Becoming a Self-Regulated Learner: An Overview. Theory Into Practice, 41(2), 64-70.

Zimmerman, B. J. (2008). Investigating self-regulation and motivation: Historical

background, methodological developments, and future prospects. American Educational Research Journal, 45(1), 166–183.