



PREDICTING THE SELF-CONCEPT OF PRIVATE SENIOR HIGH SCHOOL STUDENT-ATHLETES: THE PURVIEW AND APPLICATION OF THE TRIADIC RECIPROCAL DETERMINISM THEORY

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ABSTRACT

The self-concept of student-athletes is often challenged. This study aimed to examine the significance of motivational climate and eating habits as predictors of self-concept among senior high school student-athletes. Using multiple linear regression analysis, with 150 student-athletes as selected sample through stratified random sampling, it was found that the determinants are both significant predictors accounting 21.1% degree of influence. The Triadic Reciprocal Determinism Theory was affirmed. Collaborative activities maybe initiated by the educators, coaches, and policymakers to enhance motivational climate and eating habits to benefit the student-athletes self-concept.

KEYWORDS: *Motivational Climate, Eating Habits, Self-Concept, Student Athletes.*

INTRODUCTION

Negative self-concept among student-athletes has emerged as a significant global concern, affecting their mental health and overall well-being. Student-athletes often struggle with self-concept; their self-worth can become heavily tied to their athletic performance (Weber et al., 2023). Negative self-concept can emerge in student-athletes as they grapple with the intense and often conflicting demands of academic and athletic commitments (Gao & Ali, 2024). Students with a negative self-concept frequently have self-representations that are contradictory (Liu & Yu, 2019).

In the United States, the prevalence of negative self-concept among student-athletes is a documented issue (Weber et al., 2023). Additionally, a study conducted in United Kingdom entails that, individuals with a negative self-concept often struggle with motivation (Taylor et al., 2020). A study in Universidad de Almería – Spain, concludes that, athletes' negative self-concept is associated with individual factors and environments (Su, Qingfu, et al., 2017). Moreover, negative self-concept is identified as a key factor strongly associated with eating disorders, according to a study conducted in North Carolina, USA (Bardone-Cole et al., 2020).

In the Philippines, student-athletes with negative self-concept encounters challenges (Mateo & Tajonera, 2020). Additionally, negative self-concept can lead to amotivation or reduced motivation to participate in sports. (Richardson & Om poc, 2024). Negative self-concept is a significant issue among student-athletes in the Philippines (Salas et al., 2024). A negative self-concept was associated with lower motivation to participate in sports (Dimangadap, 2024). Lastly, a study stated that a negative school atmosphere can hinder the development of a positive self-concept (Apostol & Santos, 2023).

If an athlete's negative self-concept remains unaddressed, it can lead to various detrimental outcomes, including increased anxiety, decreased motivation, and impaired performance (Vasconcelos-Raposo et al., 2024). Ignoring problems with one's self-concept can have a domino effect on behavior, mental health, social interactions, and long-term development, recognizing and addressing these issues is crucial for fostering psychological well-being and personal growth (Bajaj, 2024). Negative self-concept can negatively impact athletic performance (Armanda Martinez, et al., 2021). Student-athletes with negative self-concepts are more susceptible to negative evaluations of themselves (Pang et al., 2024). Negative self-concept can adversely affect athletic performance and mental well-being (Ridao et al., 2021). To address this problem, this study is urgent with the limited number of research regarding this problem. Hence, this study is pursued.



Statement of the Problem

This study aimed to examine the significance of motivational climate and eating habits as predictors of self-concept among senior high school student-athletes.

Specifically, this study aimed to answer the following research objectives:

1. To determine the levels of motivational climate, eating habits, and self-concept among senior high school student-athletes;
2. To investigate if a significant relationship exists among motivational climate, eating habits, and self-concept among the senior high school student-athletes; and
3. To examine if there is a combined significant influence of motivational climate and eating habits towards self-concept among senior high school student-athletes.

Hypotheses

The null hypotheses were tested at a .05 level of significance.

Ho1. There is no significant relationship between motivational climate and self-concept among the senior high school student-athletes.

Ho2. There is no significant relationship between eating habits and self-concept among senior high school student-athletes.

Ho3. There is no combined significant influence of motivational climate and eating habits towards self-concept among senior high school student – athletes.

Theoretical Framework

This study was anchored in Bandura’s (1986) Triadic Reciprocal Determinism Theory, which explains that human behavior is influenced by the interaction of personal, behavioral, and environmental factors (Nabavi & Bijandi, 2012). Figure 1 illustrates the conceptual model, highlighting the relationships between two predictive variables – motivational climate and eating habits – and one criterion variable, self-concept of senior high school student-athletes. In this study, motivational climate variable is indicated by task involving, autonomy-supportive, socially-supportive, ego-involving, and controlling coaching (Appleton et al., 2016) stands for environmental factors presented in the theory.

The eating habits variable is represented by, healthy eating cognitions, dietary restrictions, diet superiority, and social impairment (Halim et al., 2020) stands for behavioral factors mentioned in the theory. The criterion variable, self-concept, is measured through contentment and worthiness, attractiveness, approval by others, determinism and significance, confidence and value existence, and resilience (Ghaderi, 2006). This study is delimited only to environmental and behavioral factors; thus, the personal factor is excluded.

Predictive Variable

Criterion Variable

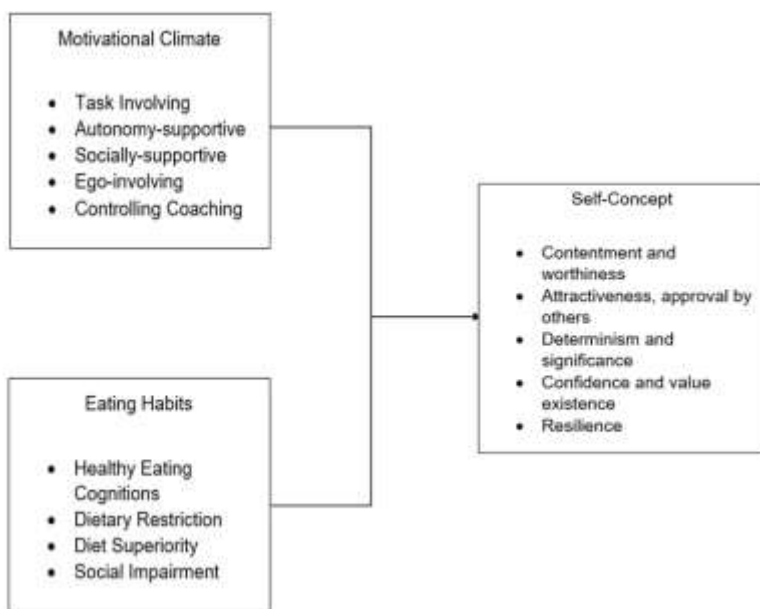


Figure 1. The Conceptual Framework of the Stud



METHOD

Research Design

This study utilized a quantitative research design, a method commonly used in disciplines such as social sciences, psychology, economics, and market research. It aimed to collect and analyze numerical data to answer research questions and test hypotheses (Jain, 2023). A predictive-correlational approach was employed to explore the influence of motivational climate and eating habits on the self-concept of private senior high school student-athletes. This design involved statistical analyses, such as regression and correlation, to determine the extent to which one variable could predict another. The insights generated were intended to inform educational practices and support decision-making within private school settings.

Locale of the Study

The study was conducted in selected private schools in Davao City that offered a variety of academic and athletic programs and learning environments. These schools were chosen to ensure a diverse population of student-athletes with different levels of experience and athletic backgrounds. This diversity provided a comprehensive context for examining the influence of motivational climate and eating habits towards self-concept within private educational institutions.

Sample and Sampling

This study focused exclusively on grades 11 and 12 student-athletes, deliberately excluding non-athletes in grades 11 and 12 to maintain relevance and consistency in the process. From a population of 208 student-athletes from the first school, 220 student-athletes from the second school, and 185 student-athletes in the third school officially enrolled in school year 2024 – 2025, whose age bracket ranged from 15-18 years old. The researcher used a stratified random sampling technique to determine the study's respondents. According to Berndt (2020), this sampling breaks up the population into smaller groups or strata according to shared or distinctive features.

Each stratum's random sample is chosen according to its size within the population. This technique is best for this study since the population has a wide range of traits, and the aim is to ensure that each characteristic is accurately represented in the sample. This promotes the study's validity and generalizability while preventing research biases like under-coverage bias.

Using a stratified random sampling technique, the researcher selected 150 Grades 11 and Grade 12 senior high school students for the academic year 2024 to 2025 as research respondents for the study. To obtain a significant result in survey research, 100 to 120 can provide sufficient data to analyze relationships and acquire meaningful results (Creswell, 2017).

Research Instrument

The motivational climate among student-athletes was measured using an adapted Likert-scale questionnaire. This instrument included items related to five key dimensions: task-involving, autonomy-supportive, socially-supportive, ego-involving, and controlling coaching styles. The reliability of the scale was confirmed with a Cronbach's alpha of 0.934, indicating an excellent level of internal consistency. The Likert scale below was used to analyze the result.

Level	Mean Interval	Descriptive Level	Descriptive Interpretation
5	4.21 - 5.00	Strongly Agree	Motivational Climate are excellent.
4	3.41 - 4.20	Agree	Motivational Climate are very good.
3	2.61 - 3.40	Neutral	Motivational Climate are good.
2	1.81 - 2.60	Disagree	Motivational Climate are poor.
1	1.00 - 1.80	Strongly Disagree	Motivational Climate are very poor.

Student-athletes' perceptions of their eating habits were assessed using an adapted Likert-scale questionnaire. The instrument included items related to healthy eating cognitions, dietary restriction, diet superiority, and social impairment. The scale demonstrated excellent reliability, with a Cronbach's alpha of 0.954. The Likert scale below was used to analyze the result.



Level	Mean Interval	Descriptive Level	Descriptive Interpretation
5	4.21 - 5.00	Strongly Agree	Eating Habits are excellent.
4	3.41 - 4.20	Agree	Eating Habits are very good.
3	2.61 - 3.40	Neutral	Eating Habits are good.
2	1.81 - 2.60	Disagree	Eating Habits are poor.
1	1.00 - 1.80	Strongly Disagree	Eating Habits are very poor.

An adapted Likert-scale questionnaire was used to measure the extent of student-athletes' self-concept. The instrument included items related to contentment and worthiness, attractiveness, approval by others, determinism and significance, confidence and value of existence, and resilience. The scale demonstrated good internal consistency, with a Cronbach's alpha of 0.886. The Likert scale below was used to analyze the result.

Level	Mean Interval	Descriptive Level	Descriptive Interpretation
5	4.21 - 5.00	Strongly Agree	Self-Concept is excellent.
4	3.41 - 4.20	Agree	Self-Concept is very good.
3	2.61 - 3.40	Neutral	Self-Concept is good.
2	1.81 - 2.60	Disagree	Self-Concept is poor.
1	1.00 - 1.80	Strongly Disagree	Self-Concept is very poor.

This instrument was also adapted from a survey available in the Tribhuvan University repository. Prior to the main survey administration, a pilot test was conducted with 30 private school student-athletes to evaluate the clarity, reliability, and validity of the research instruments. Feedback gathered from the pilot test was used to refine and improve the questionnaire items. Reliability analysis indicated high internal consistency across all scales: Motivational Climate ($\alpha = 0.934$), Eating Habits ($\alpha = 0.954$), and Self-Concept ($\alpha = 0.886$).

Data Gathering Procedure

The data gathering process involved securing ethical clearance, obtaining authorization from relevant academic offices, distributing and administering survey questionnaires with clear instructions, monitoring the process to ensure accuracy, and compiling the collected data for analysis.

Asking for Permission to Conduct the Study. The researcher first secured ethical clearance from the HCDC-SMILE following the proposal defense. Once this clearance was obtained, the researcher sought authorization from the Graduate School. Finally, the researcher requested permission from the Office of the Vice President for Academic Affairs to proceed with data collection.

Data Collection. The data collection commenced with the researcher drafting and submitting a permission letter to the principals' office to request approval for conducting the research with grades 11 and 12 student-athletes as respondents. Once permission was granted, the researcher administered the survey questionnaires following the necessary protocols,

Administration and Retrieval of Questionnaires. The researcher had adequately explained to students and their teachers how to answer the provided questionnaires with the approval and support of the school principal and sports coordinator. To ensure that the respondents understood each question clearly and provided appropriate answers, the researcher translated each question from the indicators in their own dialect during the actual administration of the survey questionnaires. The instrument was answered by the selected students from grades 11 and 12 student-athletes in the school. After the respondents had honestly and thoroughly filled out the questionnaire, the researcher downloaded all the completed questionnaires and provided all the essential data.

Tabulation and Organization of Data. After retrieving the completed questionnaires, the researcher began the process of tabulating the data by systematically entering the responses into a structured format, typically using software like Microsoft Excel. This step ensured that all data was accurately recorded and organized for analysis. The researcher then categorized the data based on relevant variables,



making it easier to identify patterns and trends. Proper tabulation and organization were essential as they formed the foundation for accurate interpretation and meaningful conclusions in the research.

Data Analysis

The researcher utilized various statistical tools to analyze the data collected from the respondents, including the mean, standard deviation, Pearson product-moment correlation coefficient, and multiple linear regression analysis. Each of these methods provided unique insights, enabling a thorough understanding of the relationships among the study's variables.

Mean. This was used to answer the first two objectives of the study. More specifically, it is used to describe the level of the motivational climate and eating habits of senior high school student-athletes.

Standard Deviation. This was used to describe the variability or spread of data within a dataset.

Pearson's product moment correlation coefficient. This tool is used to measure the linear relationship between two variables that have been measured on interval or ratio scales.

Multiple Linear Regression Analysis. Is a statistical model that uses a straight line to estimate the relationship between a dependent variable and multiple independent variables.

On measuring the strength of the correlation. In measuring the correlation, this study utilized the standard scheme in determining the strength and the significance measure of the correlation. For the r-value, the following scheme is used:

Computed r	Descriptive Interpretation
+/- 1.00	<i>Perfect correlation</i>
Between +/- 0.75 - +/- 0.99	<i>High correlation</i>
Between +/- 0.51 - +/- 0.74	<i>Moderately high correlation</i>
Between +/- 0.31 - +/- 0.50	<i>Moderately low correlation</i>
Between +/- 0.01 - +/- 0.30	<i>Low correlation</i>
0.00	<i>No correlation</i>

Ethical Considerations

Ethical guidelines were strictly observed to minimize any potential discomfort or anxiety among participants. All participants were informed about the purpose of the study, the procedures involved, and their rights to confidentiality and voluntary participation. The survey was administered through Google Forms without collecting any personally identifiable information such as names or email addresses, thereby ensuring anonymity. Participants had the freedom to withdraw from the study at any point without consequence.

To address concerns about internet connectivity and accessibility, the survey was designed to be brief and straightforward, allowing participants to complete it at their convenience. The study fully adhered to ethical research standards, respecting the privacy, autonomy, and informed consent of all participants.

RESULTS AND DISCUSSION

In this chapter, the results of the study are presented. Specifically, included in this chapter are descriptive analysis, correlation analysis, regression analysis, and the summary of the findings.

Descriptive Analysis

Table 1 is the descriptive table. It contains the variable involved in the study namely, motivational climate, eating habits and self-concept. It also contains the number of samples, standard deviation, the mean and their corresponding descriptive levels.



Table 1. Descriptive Presentation

Variables	N	Mean	SD	Descriptive Interpretation
Motivational Climate (IV₁)	150	3.83	0.557	High
Task-involving		4.40	0.588	Very High
Autonomy-supportive		4.36	0.643	Very High
Socially supportive		4.33	0.741	Very High
Ego-involving		3.16	1.125	Moderate
Controlling coaching		2.88	1.167	Moderate
Eating Habits (IV₂)	150	3.06	0.884	Moderate
Healthy Eating Cognitions		3.54	0.839	High
Dietary Restriction		2.83	1.135	Moderate
Diet Superiority		2.99	1.001	Moderate
Social Impairment		2.87	1.070	Moderate
Self-Concept (DV)	150	3.65	0.504	High
Contentment and worthiness		3.79	0.669	High
Attractiveness, approval by others		3.50	0.709	High
Determinism and significance		3.60	0.725	High
Confidence and value existence		3.65	0.628	High
Resilience		3.73	0.849	High

Specifically, table 1 shows, that motivational climate achieved an overall mean of 3.83 described as high level. It indicates that the student-athletes' motivational climate is very good. Three indicators namely; task-involving, autonomy-supportive, and socially supportive obtained corresponding means described as very high level; two of each indicator namely, ego-involving and controlling coaching obtained a mean described as moderate level.

Additionally, it also shows, that eating habits achieved a mean an overall mean of 3.06 described as moderate level. It indicates that student-athletes' eating habits is good. One indicator namely healthy eating cognition obtained means described as high and three indicators namely; dietary restriction, diet superiority, and social impairment obtained a means described as moderate level.

Finally, the self-concept variable achieved an overall mean of 3.65 described as high level. It indicates that student-athletes' self-concept is very good. All indicators namely; contentment and worthiness, attractiveness, approval by others, determinism and significance, confidence and value existence and resilience obtained a means described as high level.

Correlation Analysis

Table 2 is correlation table. It contains the predictive variables involved in the study namely, motivational climate and eating habits; and the criterion variable that is self-concept. It also contains the r-value, p-value, the decision on hypothesis, and the corresponding descriptive levels.

Table 2. Correlation Table

<i>Self-Concept of Senior High School Student-Athletes</i>				
	r	p-value	Decision on Ho @ 0.05 level of significance	Interpretation
<i>Motivational Climate (IV₁)</i>	0.420	0.000	Reject H ₀₁	Significant
<i>Eating Habits (IV₂)</i>	0.371	0.000	Reject H ₀₂	Significant



Table 2 specifically shows that correlation between motivational climate and self-concept variable obtained a p-value of 0.000 which is less than 0.05 degree of confidence. Hence, the null hypothesis was rejected. It indicates that the correlation between motivational climate and self-concept among senior high school student-athletes is significant at high positive level. Moreover, the correlation between eating habits and self-concept variable obtained a p-value of 0.000 which is less than 0.05 alpha. Hence, the null hypothesis was rejected. It indicates that the correlation between eating habits and self-concept is significant at high positive level.

The table shows that the two predictive variables significantly correlate with the criterion variable. This implies for every unit change in the first, there is corresponding unit change in the latter.

Regression Analysis

Table 3 is regression analysis. It contains the predictive variables involved in the study namely motivational climate and eating habits, and the criterion variable is self-concept. The table also contains the coefficient beta, standard estimate, t-value, p-value, decision on hypotheses, and the corresponding interpretations.

Table 3. Regression Table

Self-Concept of Senior High School Student-Athletes							
	Unstandardized Coefficients		Standardized Coefficients			Decision on <i>H₀₃</i>	interpretation
	β	Std. Error	Beta	t	Sig.		
Constant	2.195	0.256		8.570	0.000		
<i>Motivational Climate (IV₁)</i>	0.283	0.076	0.313	3.713	0.000	Reject	Significant
<i>Eating Habits (IV₂)</i>	0.123	0.048	0.216	2.555	0.012	Reject	Significant

R = 0.460; R² = 0.211; F-value = 19.713; p-value = 0.000

Table 3 presents the results of the regression analysis examining the influence of motivational climate and eating habits on the self-concept of senior high school student-athletes. The motivational climate variable yielded a β coefficient of 0.283, indicating a 28.3% degree of influence on self-concept. With a p-value of 0.000, which is less than the 0.05 level of significance, the null hypothesis was rejected, confirming that the influence of motivational climate on self-concept is statistically significant.

Similarly, the eating habits variable obtained a β coefficient of 0.480, suggesting a 48.0% degree of influence on self-concept. This influence is also statistically significant, as indicated by a p-value of 0.000, which is below the 0.05 threshold. Therefore, the null hypothesis was again rejected, establishing the significance of eating habits in predicting self-concept.

Finally, the combined influence of both predictors is reflected in the R-squared value of 0.211, indicating that motivational climate and eating habits together explain 21.1% of the variance in student-athletes' self-concept. This combined effect is also statistically significant, with a p-value of 0.000, confirming the predictive value of the model.

Summary of Findings

1. The motivational climate, and the self-concept of senior high school student-athletes are very good, while the eating habits is fair.
2. The motivational climate and eating habits are significantly correlated with self-concept at a high degree.
3. The motivational climate and eating habits significantly (21.1% combined degree) influence the self-concept.

The results of the study are discussed in this chapter. The discussions are made in the following manner: structure of Descriptive Analysis Results, Correlation Results, and Regression Results. The discussions highlight the citation of previous findings which were either supported or denied using the results of this study. This chapter also includes the conclusion and the recommendations.



Very Good Motivational Climate Among Student-Athletes

The finding of this study have shown that the motivational climate was rated as very good which supports the assertions of Gomez-López et al. (2020) and Harwood (2020), who stated that the majority of student-athletes experience a high level of motivational climate. This can be attributed to coaches who promote a task-oriented environment, emphasizing effort, enthusiasm for learning, and individual progress.

Similarly, the results affirm the findings of Castillo-Jiménez et al. (2022), who described an empowering motivational climate as one that promotes task involvement, supports autonomy, and provides social support. This type of climate fosters an environment in which student-athletes are encouraged to actively engage in their tasks, feel a sense of autonomy, and receive the necessary social support for optimal performance and well-being.

In contrast, the findings of this study differ from those of Ewaldz (2016), who found that although a task-involving motivational climate was positively related to team cohesion, an ego-involving climate had a negative impact. This suggests that different types of motivational climates can distinctly affect group dynamics and team cohesion.

Fair Eating Habits Among Student-Athletes

The results of this study are supported by Klein et al. (2021), who specified that eating habits among student-athletes are moderately practiced. Maintaining proper eating habits is crucial, particularly for athletes who rely on nutrition to optimize their performance and overall well-being (Vázquez-Espino, 2022).

These findings are also consistent with the study of Kumar (2024), who discussed that moderate eating habits, when balanced and well-structured, can positively impact student-athletes. Despite the abundance of scientific information available on nutrition, athletes often lack sufficient understanding and accurate knowledge of this subject. As such, Elias et al. (2021) emphasized the importance of developing and implementing specialized educational programs within athletic training that provide athletes with essential nutrition knowledge.

Very Good Self-Concept Among Student-Athletes

The results of the study are supported by Négele et al. (2020), who reported that athletes tend to have a high level of positive self-concept. This finding is also affirmed by D'Anna et al. (2015), who confirmed that athletes with a strong self-concept are better able to perform and commit to high-level sports.

These results imply that a well-developed self-concept can enhance athletes' motivation, confidence, resilience, and their ability to overcome challenges and achieve goals (Martín-Talavera, 2023). Furthermore, Wu et al. (2023) asserted that a clear and positive self-concept can empower young athletes to better understand themselves and unlock their full potential.

Significant Correlations Between Predictors and the Criterion Variable

The results indicate that promoting a positive motivational climate and encouraging healthy eating habits are closely linked to the development of student-athletes' strong self-concept. Flores-Piñero et al. (2024) indicated that, by creating an environment that encourages positive reinforcement and support, individuals are more likely to adopt and maintain healthy behaviors and can lead to improved self-esteem and a more positive self-image. Moreover, the study agrees with Conde-Pipó et al. (2021), indicated that when individuals are educated about the benefits of healthy eating and provided with the tools to make nutritious choices, they are more likely to feel empowered and confident in their ability to manage their health.

For instance, a study by Kristensen et al. (2025) found that a performance-oriented climate may not always foster a positive self-concept and could potentially lead to maladaptive behaviors.

Significant Influence of Predictor Variables on the Criterion Variable

The results indicated that the interplay between motivational climate and eating habits indeed underscores the interconnected nature of psychological and lifestyle factors in shaping self-concept. Xu et al. (2024) highlights the importance of creating a supportive and positive motivational environment alongside promoting healthy eating habits. By fostering a positive motivational climate, individuals are more likely to feel encouraged and supported, which can enhance their self-esteem and confidence. Simultaneously, promoting



healthy eating habits provides individuals with the knowledge and tools to make nutritious choices, further empowering them and positively influencing their self-concept (Pallas, 2023).

Conversely, a study by Firth et al. (2020) indicates that while healthy eating is associated with improved mood and reduced stress, the relationship between positive self-concept and healthy eating behaviors is complex and not always straightforward.

Conclusions

Based on the results of the study, it was concluded that motivational climate and eating habits are significant determinants on the self-concept of senior high school student-athletes, with 21.1% combined degree of influence on the latter. Hence, The Triadic Reciprocal Determinism Theory was affirmed, stating that human behavior is caused by personal, behavioral, and environmental influences.

Recommendations

Based on the conclusion, it is recommended that future research utilizing other variables not covered in this study may be undertaken in order to account for the remaining 78.9% variance in the self-concept.

Additionally, to develop a positive self-concept among student-athletes include fostering a task-oriented motivational climate that emphasizes personal effort, learning, and improvement rather than competition. Coaches and educators are encouraged to provide consistent support, encouragement, and recognition of individual progress. Promoting mental health awareness, teaching effective coping strategies, and encouraging balanced nutrition and physical well-being also play key roles in enhancing self-esteem and overall self-concept in student-athletes.

Finally, a qualitative study may be undertaken to explore potential emerging themes and corresponding sub-themes which may be utilized as variables that contribute to the improvement of student-athletes' self-concept.

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