



# INFLUENCE OF MENTAL IMAGERY AND GOAL SETTING ON SELF-CONFIDENCE AMONG STUDENT-ATHLETES

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## ABSTRACT

*Student-athletes experienced low self-confidence. This study determined the significance of mental imagery and goal-setting as predictors of self-confidence using the predictive research design. A multiple linear regression analysis was utilized, involving 150 samples selected through simple random sampling. Mental imagery and goal-setting significantly predict self-confidence with a 48.6% combined degree of influence. Behavioral goal-setting theory is affirmed. Conduct research utilizing other variables not covered in the study to account for the 51.4% variance in the criterion variable. Further, examine policies to promote self-confidence – improving overall health, well-being, and educational outcomes of student-athletes.*

**KEYWORDS:** *Mental Imagery, Goal-Setting, Self-Confidence, Student-Athletes*

## INTRODUCTION

Low self-confidence is common among student-athletes and can negatively impact their sports performance. This lack of confidence often stems from the psychological pressures of managing academic and athletic responsibilities (Smith & Smoll, 2020). Amid the intense demands of athletic performance, low self-confidence has emerged as a prevalent and detrimental issue affecting the overall well-being and success of student-athletes.

In India, Jose & Joseph (2018) cited that low self-confidence remains a prevalent issue among student-athletes, where diminished self-belief negatively impacts their performance, motivation, and psychological wellbeing, highlighting the need for strategies like imagery training to foster confidence and resilience. Furthermore, a survey of 1,375 students in the USA found that 70 percent of student-athletes struggle with low self-confidence, limiting their participation in class and sports (Akbari, 2020).

According to Lopez (2018) notes that many student-athletes in the Philippines struggle with low self-confidence, leading to anxiety and defensiveness. Juezan (2022) observed 119 college athletes facing similar challenges due to academic and sports pressures. Additionally, Pesidas & Serrano (2023) found that self-doubt, perfectionism, peer comparison, and over-criticism contribute to low confidence in 210 public secondary student-athletes. Low self-confidence in student-athletes can lead to poor performance, increased anxiety, and reduced resilience (Lochbaum et al. 2022). Athletes with low confidence also struggle with performance and commitment to training (Arcangel, 2022). This study addresses the gap in research by exploring how combining goal-setting and mental imagery can boost confidence and improve performance in student-athletes.

## Statement of the Problem

This study aimed to determine the significance of mental imagery and goal-setting as predictors of self-confidence. Specifically, this study aimed to achieve the following objectives:

1. To describe the levels of mental imagery in terms of motivational specific imagery, motivational general mastery imagery, and motivational general arousal imagery; goal setting in terms of; mastery approach goal, performance-approach goal, and performance-avoidance goal; and self-confidence in terms of; achievement, adaptability, and self-efficacy among student-athletes.
2. To determine the significant relationship between mental imagery and goal-setting on self-confidence among student-athletes.
3. To determine the combined significant influence of mental imagery and goal-setting on self-confidence among student-athletes.

## Hypotheses

These hypotheses were tested at a 0.05 level of significance.

Ho<sub>1</sub>: Mental imagery and goal-setting do not significantly correlate with self-confidence among student athletes.

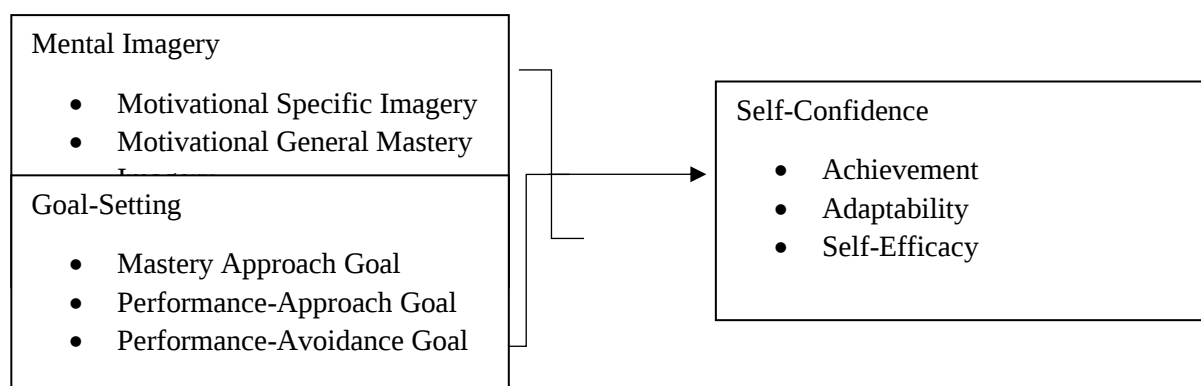
Ho<sub>2</sub>: Mental imagery and goal-setting do not significantly influence self-confidence among student athletes.



### Theoretical/Conceptual Framework

Behavioral Goal Setting Theory was anchored by Rachmad (2022) behavioral goal setting as the process of setting specific, measurable, achievable, relevant, and time-bound (SMART) goals that focused on the behaviors required to achieve the desired outcomes.

In this study, the mental imagery variable indicated by motivational specific imagery, motivational general mastery imagery, and motivational general arousal imagery stands process of setting goals mentioned by Hall & Munroe (2019). Furthermore, the goal-setting variable indicated by mastery approach goal, performance approach goal, and performance avoidance goal (Elliot & McGregor, 2001) stands for the process of setting goals. Lastly, the self-confidence variable indicated by achievement, adaptability, and self-efficacy (Schunk & DiBenedetto, 2016) stands for the behaviors required. In conclusion, this study is delimited only to the process of setting goals and behaviors required as variables mentioned in the theory. However, the idea of outcomes asserted in the theory is excluded from the study.



**Figure 1. Conceptual Framework of the Study**

### METHOD

This chapter presents the methods and procedures that the researcher used in conducting the study. It includes the research design, locale of the study, sample and sampling technique, research instrument, data gathering procedure, data analysis, and ethical considerations.

#### Research Design

This study used a predictive research design with a descriptive correlation approach to forecast outcomes based on existing data. It aimed to predict how mental imagery and goal-setting influence self-confidence among student-athletes. By analyzing patterns and relationships between variables using statistical methods, the study aimed to predict self-confidence levels based on these psychological strategies (Field, 2017).

#### Locale of the Study

The research locale for this study was one of the private schools in the Division of Davao City, Region XI, known for producing national medalist athletes. The school was selected due to its diverse range of student-athletes participating in various sports, ensuring a representative sample for the study. This locale is particularly suitable for evaluating the impact of the fitness program across different demographic groups, allowing for a comprehensive assessment. By selecting a location with these characteristics, researchers can collect reliable data and make well-informed conclusions about the program's effectiveness and its potential for broader implementation.

#### Sample and Sampling Technique

The researcher used simple random sampling to select 150 student-athletes, ensuring each had an equal chance of being chosen, which produced unbiased and representative samples (Noor, 2022; Frost, 2023). The study targeted student-athletes aged 12 to 16, enrolled in school and actively participating in sports. Exclusions included those outside this age range or not involved in sports. Informed consent was obtained from parents or guardians, and assent from students. Participation was voluntary, and respondents could withdraw at any time.

**Research Instruments**

To gather data on one of the independent variables, which is mental imagery, the researcher adapted the Psychometric characteristics of the Spanish version of the Sport Imagery Questionnaire of Ruiz (2014). It contains 15-item statements with three indicators: motivational specific imagery, motivational general mastery imagery, and motivational general arousal imagery. Respondents utilized a 4-point Likert scale for their responses, categorized as follows: 4 as Very High, 3 as High, 2 as Low, and 1 as Very Low. The interpretation of the results for mental imagery is summarized in the table below:

| Ranges of Means | Description | Descriptive Interpretation                          |
|-----------------|-------------|-----------------------------------------------------|
| 3.25 – 4.00     | Very High   | The student-athletes mental imagery is very strong. |
| 2.50 – 3.24     | High        | The student-athletes mental imagery is strong.      |
| 1.75 – 2.49     | Low         | The student-athletes mental imagery is weak.        |
| 1.00 – 1.74     | Very Low    | The student-athletes mental imagery is very weak.   |

For the other independent variable, the goal-setting, the researcher adapted the Achievement Goal Questionnaire-Revised by Ratsameemonthon (2015). It contains 15-item statements with three indicators: mastery approach goal, performance-approach goal, and performance-avoidance goal. Respondents utilized a 4-point Likert scale for their responses, categorized as follows: 4 as Very High, 3 as High, 2 as Low, and 1 as Very Low. The interpretation of the results for goal-setting is summarized in the table below:

| Ranges of Means | Description | Descriptive Interpretation                      |
|-----------------|-------------|-------------------------------------------------|
| 3.25 – 4.00     | Very High   | The student-athletes goal-setting is very good. |
| 2.50 – 3.24     | High        | The student-athletes goal-setting is good.      |
| 1.75 – 2.49     | Low         | The student-athletes goal-setting is weak.      |
| 1.00 – 1.74     | Very Low    | The student-athletes goal-setting is very weak. |

Likewise, the self-confidence, which is the dependent variable, the researcher adapted the SPQ20 Sports Personality Questionnaire by Cameron (2021), which is a 15-item questionnaire with three indicators: Achievement, Adaptability, and Self-Efficacy. Respondents utilized a 4-point Likert scale for their responses, categorized as follows: 4 as Very High, 3 as High, 2 as Low, and 1 as Very Low. The interpretation of the results for self-confidence is summarized in the table below:

| Ranges of Means | Description | Descriptive Interpretation                           |
|-----------------|-------------|------------------------------------------------------|
| 3.25 – 4.00     | Very High   | The student-athletes self-confidence is very strong. |
| 2.50 – 3.24     | High        | The student-athletes self-confidence is strong.      |
| 1.75 – 2.49     | Low         | The student-athletes self-confidence is weak.        |
| 1.00 – 1.74     | Very Low    | The student-athletes self-confidence is very weak.   |

In summary, the research instrument has 45 items. The questionnaire underwent expert validation and pilot testing, with reliability assessed using the Cronbach Alpha test, which requires a minimum value of 0.70. The overall reliability coefficient was found to be 0.82, exceeding the acceptable threshold, indicating strong internal consistency and suggesting that the questionnaire is now sufficiently reliable for future use.

**Data Gathering Procedure**

Before data collection, the researcher obtained clearance from the Society for Moral Integrity and Legal Ethics (SMILE) to ensure ethical conduct. Following SMILE approval, endorsements were secured from the Dean of the Graduate School, the thesis adviser, and the Schools Division Office of Davao City. After receiving approval from the Schools Division Superintendent, letters were sent to school principals. During data gathering, face-to-face questionnaires were administered with clear instructions, and informed consent was obtained from parents and assent from respondents. Completed questionnaires were securely stored, and data was analyzed using appropriate statistical tools, ensuring confidentiality and integrity.



### Data Analysis

In analyzing the result of the study, the researcher was using the following statistical tools:

The mean was used to describe the level of mental imagery, goal-setting, and self-confidence among student-athletes. Pearson's  $r$  was utilized to determine the significant relationship between mental imagery and goal-setting on self-confidence among student-athletes. Multiple linear regression was used to determine the combined significant influence of mental imagery and goal-setting on self-confidence among student-athletes.

### Ethical Consideration

This study strictly followed ethical guidelines. Respondents were informed of the study's purpose and their rights. In line with Republic Act No. 10532, informed consent was obtained from parents or guardians of minors (ages 12–16), followed by student assent. Participation was voluntary, with clear explanations of the study's objectives, risks, benefits, and confidentiality, following the Data Privacy Act of 2012. Random sampling ensured fairness, and participants received pens and certificates as appreciation. The researcher, qualified in Physical Education and pursuing graduate studies, ensured competence, transparency, and inclusivity throughout the process, while providing a safe and comfortable environment for student-athletes.

## RESULTS AND DISCUSSION

### Descriptive Analysis

Table 1 is the descriptive table. It contains the variables involved in the study, namely, mental imagery, goal-setting, and self-confidence among student-athletes. It also contains the number of samples, the mean, and their descriptive interpretations.

| Variables                               | N          | Mean        | Descriptive Interpretation |
|-----------------------------------------|------------|-------------|----------------------------|
| <b>Mental Imagery</b>                   | <b>150</b> | <b>3.22</b> | <b>High</b>                |
| 1. Motivational Specific Imagery        |            | 3.36        | Very High                  |
| 2. Motivational General Mastery Imagery |            | 3.21        | High                       |
| 3. Motivational General Arousal Imagery |            | 3.08        | High                       |
| <b>Goal-Setting</b>                     | <b>150</b> | <b>3.1</b>  | <b>High</b>                |
| 1. Mastery-Approach Goal                |            | 3.17        | High                       |
| 2. Performance-Approach Goal            |            | 3.12        | High                       |
| 3. Performance-Avoidance Goal           |            | 3.01        | High                       |
| <b>Self-Confidence</b>                  | <b>150</b> | <b>3.24</b> | <b>High</b>                |
| 1. Achievement                          |            | 3.23        | High                       |
| 2. Adaptability                         |            | 3.28        | Very High                  |
| 3. Self-Efficacy                        |            | 3.21        | High                       |

Specifically, Table 1 shows that the mental imagery variable obtained a mean of 3.22, which is described as high. This indicates that the student-athletes mental imagery is strong. One of the indicators got a mean of 3.36, which is described as very high. The rest of the indicators got respective means described as high. Moreover, Table 1 shows that the goal-setting variable obtained a mean of 3.1, which is described as high. This indicates that the student-athletes goal-setting is good. One of the indicators got a mean of 3.17, which is described as high. The rest of the indicators got respective means described as high. Finally, the self-confidence variable obtained a mean of 3.24, which is described as high. This indicates that the student-athletes self-confidence is strong. One of the indicators got a mean of 3.28, which is described as very high. The rest of the indicators got respective means described as high.

### Mental Imagery among Student-Athletes

This study reveals that the overall mean of the mental imagery of student-athletes, the respondents perceived that the motivational-specific imagery with the highest mean score was a description of very high. This means that student-athletes mental imagery is very strong. Respondents used goal-oriented visualization to boost confidence, motivation, and performance. This supports Bastug et al. (2017), who found that student-athletes gained confidence by visualizing achievements. Similarly, Pakulanan (2016) noted that highly confident athletes used motivational-specific imagery more than their less confident peers. Dev et al. (2020) reported that 63% of students used such imagery to enhance focus and intensity. Abdul Rahman et al. (2022) also found that visualizing goals, like winning medals, increased athlete motivation.



**Motivational General Mastery Imagery.** Student-athletes demonstrated strong mastery imagery, indicating effective coping skills, goal commitment, and confidence. Visualizing past successes and strategies enhances resilience. This aligns with Sari (2017), who found imagery helped kickboxers overcome challenges and improve performance, and Simonsmeier & Buecker (2016), who emphasized its role in competition. Yalcin and Ramazanoglu (2020) also noted that belief in one's abilities leads to higher confidence, echoed by Rhodes et al. (2018), who found athletes gain control and self-confidence by visualizing success.

**Motivational General Arousal Imagery.** High arousal imagery levels suggest that student-athletes use visualization to manage pre-competition emotions, reducing anxiety. While some feel confident and mentally prepared, others may not always feel physically strong or motivated. Pakulanon (2016) highlighted how imagery turns stress into focused energy, boosting confidence, while Sari (2017) found it enhances emotional control and performance readiness.

### **Goal-Setting among Student-Athletes**

The study highlighted that the overall mean of the Mastery-approach goal received the highest mean score, indicating a high level. This means that the student-athletes goal-setting is good. Student-athletes often display strong mastery-approach goals, focusing on skill development and self-improvement. This supports Noel et al. (2017), who emphasized improving personal performance, and aligns with Bardach et al. (2020), who found mastery goals enhance motivation, persistence, and critical thinking. Clements & Kamau (2017) further noted that mastery orientation fosters resilience and career ambition.

High levels of performance-approach goals were also observed, indicating good goal-setting. Daumiller et al. (2021) linked these goals to high performance and motivation, though Wikman et al. (2014) found effects on fear of failure may fade over time. Alhadabi & Karpinski (2020) suggested that focusing on outperforming others may lead to shallow learning, while Levontin & Bardi (2018) found prosocial athletes may prefer shared success when combining different goal types.

Performance-avoidance goals had the lowest mean but still rated high, suggesting student-athletes may fear failure, which can hinder effort and learning (Theodosiou et al. 2018). Sanusi et al. (2018) reported that such avoidance leads to missed opportunities, while Song et al. (2015) emphasized the role of coaches, psychologists, and peer support in reducing these goals and improving self-efficacy.

### **Self-Confidence among Student-Athletes**

The study revealed that the overall mean of self-confidence, adaptability received the highest mean score, indicating a very high level. This shows that student-athletes' self-confidence is very strong. This was confirmed by Orlanes et al. (2024) confirmed that adaptability enhances athletes' resilience and confidence in competition. This supports Holliman et al. (2018), who defined adaptability as adjusting thoughts, behavior, and emotions in changing situations, and Ivashchenko et al. (2017), who linked adaptability and team cohesion to athletic and academic success.

Achievement showed a high level, indicating strong self-confidence among student-athletes, who associate success with effort, focus, and perseverance. This aligns with Werdhiastutie et al. (2020), who described achievement motivation as the drive to succeed and feel competent. Sivrikaya (2019) found a positive link between academic and achievement motivation, while Mouloud & Elkader (2016) emphasized the desire for excellence in sport performance.

Self-efficacy also scored high, reflecting student-athletes' belief in their ability to reach goals. This confidence fuels motivation and goal-setting. Perera et al. (2019) found self-efficacy strongly impacts perceived performance. Jimenez-Monteagudo et al. (2023) and Turan (2018) further showed that high self-efficacy improves confidence, resilience, mental imagery, and overall performance.

### **Correlation Analysis**

Table 2 is the correlation table. It specifically contains the predictive variables, namely, mental imagery and goal-setting. It contains the criterion variable, which is the self-confidence among student-athletes. Lastly, it contains the r-value, the p-value, the decision on the hypotheses, and the corresponding interpretation.

**Table 2. Correlation Table**

| Predictive Variables | Self-Confidence among Student-Athletes |         |                            |                                                    |
|----------------------|----------------------------------------|---------|----------------------------|----------------------------------------------------|
|                      | r                                      | p-value | Decision on H <sub>0</sub> | Interpretation                                     |
| Mental Imagery       | 0.596                                  | 0       | Reject                     | There is a significant moderately high correlation |
| Goal-Setting         | 0.674                                  | 0       | Reject                     | There is a significant moderately high correlation |

Table 2 specifically shows that the correlation between mental imagery and the self-confidence variable obtained p-values of 0.000, which is less than 0.05 degree of confidence. Hence, the null hypothesis was rejected. It indicates that the correlation between mental imagery and self-confidence is significant. Such correlation obtained an r-value of 0.596, which indicates a moderately high correlation. Moreover, the correlation between goal-setting and self-confidence variable obtained a p-value of 0.000, which is less than a 0.05 degree of correlation. Hence, the null hypothesis was rejected. It indicates that the correlation between goal-setting and self-confidence is there is significant. Such correlation obtained an r-value of 0.674, which indicates a moderately high correlation.

The study found a statistically significant correlation between mental imagery, goal-setting, and self-confidence among student-athletes. This suggests that using imagery and setting clear goals can strengthen self-belief and improve both athletic and academic performance. The moderate-to-high correlation between mental imagery and self-confidence supports findings by Martini et al. (2015) and Anton et al. (2017), who emphasized its role in enhancing performance and psychological readiness.

Similarly, the significant link between goal-setting and self-confidence confirms that setting challenging goals boosts motivation and belief in one's abilities. This aligns with Gonzales (2024) and LaFratta et al. (2021), who connect goal-setting with self-efficacy and confidence. These results support Behavioral Goal Setting Theory, which posits that mental imagery and goal-setting strengthen cognitive frameworks, fostering success in sports and academics.

### Regression Analysis

Table 3 is the regression table. It contains the predictors, namely, mental imagery and goal-setting. It contains the criterion variable, which is self-confidence. Finally, it contains the  $\beta$  coefficient, t value, p-value, the decision on hypotheses, and the corresponding interpretation.

Table 3 specifically shows that the mental imagery variable obtained a  $\beta$  coefficient of 0.229, which indicates that it has a 22.9% degree of influence on self-confidence among student-athletes. Such a degree of influence is significant as indicated by the p-value of 0.003, which is less than 0.05 alpha level. Moreover, the goal-setting variable obtained a  $\beta$  coefficient of 0.438, which indicates that it has a 43.8% degree of influence on self-confidence.

Furthermore, Table 3 shows that the two predictive variables obtained an  $R^2=0.486$ , which denotes that together they have a 48.6% combined degree of influence on the criterion variable. This combined influence is statistically significant, p-value of 0.000, which is below the 0.05 alpha. Finally, the table shows the regression formula for self-confidence, that is  $SC = 0.229 MI + 0.483 GS + 1.146$ .

**Table 3. Regression Table**

| Predictors            | Self-Confidence among Student-Athletes |            |                           |       |       |                            |                                      |
|-----------------------|----------------------------------------|------------|---------------------------|-------|-------|----------------------------|--------------------------------------|
|                       | Unstandardized Coefficients            |            | Standardized Coefficients |       | Sig.  | Decision on H <sub>0</sub> | Interpretation                       |
| Independent Variables | $\beta$                                | Std. Error | Beta                      | T     |       |                            |                                      |
| (Constant)            | 1.146                                  | 0.185      |                           | 6.18  | .000  |                            |                                      |
| Mental Imagery        | 0.229                                  | 0.076      | 0.247                     | 3.003 | 0.003 | Reject                     | Significant low correlation          |
| Goal Setting          | 0.438                                  | 0.072      | 0.503                     | 6.116 | 0.000 | Reject                     | Significant moderate low correlation |

$R = .697$ ;  $R^2 = .486$ ; F-value = 69.417; p-value = 0.000



The result of the regression analysis revealed that in a singular capacity, the mental imagery does significantly influence self-confidence among student-athletes. On the other hand, goal-setting demonstrates a significant predictive power, confirming that goal-setting is a significant predictor of self-confidence in a singular capacity. Overall, both mental imagery and goal-setting significantly influence self-confidence among student-athletes. This signifies that using both techniques together can lead to greater improvements in confidence than when used individually.

This study supports Morris et al. (2020), who found that mental imagery is strongly influenced by self-confidence, helping athletes visualize success and build belief under pressure. Furley & Woods (2016) also emphasized that imagery enhances focus and mental preparation, boosting performance confidence.

Effective goal-setting also leads to increased self-confidence. Krakauer and Hohman (2021) noted that clear, measurable goals help athletes track progress and stay motivated, while Sides & Cuevas (2020) found that achieving goals and receiving feedback enhances self-efficacy and reinforces belief in improvement.

A key limitation of this study is the lack of existing research directly measuring the influence of mental imagery and goal-setting on self-confidence among student-athletes.

### Conclusions

Based on the results, it is concluded that mental imagery and goal-setting are significant predictors of self-confidence, with a 48.6% combined degree of influence. The behavioral goal-setting theory is affirmed.

### Recommendations

Based on this conclusion, it is recommended that further studies may be conducted using other variables not covered in this study to trace the 51.4% variance in self-confidence in PE.

Based on the result of the study, mental imagery and goal-setting significantly influence self-confidence. The findings shall be used to address the Sustainable Development Goals (SDGs) 3: Good Health and Well-being by developing robust policies structured to improving the sports programs that is beneficial for the overall well-being of student-athletes and (SDG) 4: Quality education by aligning curriculum standards of PE graduates to have deeper discussion on coaching pedagogy and sports psychology to further enhance the discussion in the realm of sports psychology. By exploring these variables, researchers can contribute to strategies that promote self-confidence, improving the overall health, well-being, and educational outcomes of student-athletes worldwide.

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