

**CORRELATION BETWEEN SELF-CONFIDENCE AND MOTIVATION
LEVELS AND ANXIETY LEVELS AMONG TCS SEMARANG KU-3
SWIMMING ATHLETES****Ario Rizky Firmansyah¹, Sungkowo²**Universitas Negeri Semarang^{1,2}rizkyfirmansyah798@students.unnes.ac.id**Abstract**

Correlation Between Self-Confidence and Motivation Levels and Anxiety Levels Among TCS Semarang KU-3 Swimming Athletes. Anxiety is one of the psychological factors that can influence athletes' performance, particularly in individual sports such as swimming, where athletes are required to perform optimally under competitive pressure. Self-confidence and motivation are considered important psychological factors associated with athletes' anxiety levels; however, studies examining their simultaneous relationship among youth swimming athletes remain limited. This research investigated the association between self-confidence, motivation, and anxiety among KU-3 swimmers at Tri Cakti Semester (TCS) Semarang. A quantitative correlational approach was employed, involving all 26 KU-3 athletes, who were recruited using a total sampling technique. The data were gathered using self-confidence, motivation, and anxiety questionnaires and analyzed using multiple linear regression with IBM SPSS Statistics 25. Prior to hypothesis testing, normality and multicollinearity tests were conducted to ensure that the regression assumptions were satisfied. The results showed that self-confidence and motivation simultaneously had a significant relationship with anxiety levels ($F = 15.776$; $p < 0.001$), explaining 57.8% of the variance in athletes' anxiety levels ($R^2 = 0.578$). Partially, self-confidence was negatively associated with anxiety ($\beta = -0.785$; $p < 0.001$), indicating that athletes with higher self-confidence tended to experience lower anxiety. In contrast, motivation demonstrated a positive significant relationship with anxiety ($\beta = 0.306$; $p = 0.040$), suggesting that higher motivation may be accompanied by increased competitive anxiety when psychological readiness is not well managed. These findings emphasize the importance of integrating psychological training, particularly strategies to enhance self-confidence and manage motivation effectively, into athlete development programs to reduce anxiety and optimize competitive performance among youth swimming athletes.

Keywords: Self-Confidence; Motivation; Anxiety; Swimming Athletes; Sport Psychology

Submitted : 08th of July 2026Accepted : 31th of July 2026Published : 31th of July 2026

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E-Mail: rizkyfirmansyah798@students.unnes.ac.idDOI <http://dx.doi.org/10.31851/hon.v9i2.22259>Jurnal Laman Olahraga Nusantara licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/)**INTRODUCTION**

Swimming is a competitive sport characterized by measurable, objective, and internationally standardized competitions. A swimmer's performance is determined by the time recorded in a race, so any technical error or psychological distraction

can have a direct impact on the outcome of the competition (Kusumadewi et al., 2021a). In addition, swimming is an individual sport in which the entire responsibility for achieving competitive results rests with the athlete. This situation makes swimmers more susceptible to psychological pressure than athletes in team sports. When competing, athletes are often faced with the pressure to meet specific time targets, the expectations of their coaches and parents, and competition from other athletes of comparable ability (Palgunadhi et al., 2024). These circumstances can potentially lead to anxiety that may affect an athlete's performance during a competition.

Based on initial observations at the Tri Cakti Semesta Swimming Club in Semarang, several athletes in Age Group (AG) 3 exhibited symptoms of pre-competition anxiety, such as nervousness, lack of focus, concerns about competition results, and a decline in performance compared to practice sessions. This situation indicates that psychological factors are an important aspect that must be considered in the development of young athletes. If it is allowed to exist it can have a detrimental effect on performance and the training program

Anxiety is a common psychological condition experienced by athletes both before and during competitions. Anxiety is characterized by feelings of worry, fear of failure, tension, and uncertainty about the outcome. In the context of sports, anxiety can manifest as either cognitive anxiety or somatic anxiety (Kusumadewi et al., 2021). Cognitive anxiety is related to negative thoughts, self-doubt, and concerns about the outcome of a match, while somatic anxiety is manifested through physiological responses such as an increased heart rate, muscle tension, and difficulty concentrating. High levels of anxiety can interfere with motor coordination, decision-making, and an athlete's ability to demonstrate previously practiced skills. A study by Novita & Amrulloh (2026) also found that competition anxiety among swimmers can affect their focus, emotional stability, and performance during competitions.

Self-confidence is thought to be an important factor when it comes to managing anxiety. Self-efficacy is how you see yourself to be able to accomplish

actions and a desired outcome albeit. Confidence makes optimists out of athletes, it blinds them to the challenges and gloom associated with competition. Conversely, low self-confidence can lead to doubts about one's abilities, thereby increasing anxiety during competition. A study conducted by Purnamasari dan Novian (2021) found that athletes with greater self confidence are generally less likely to experience high levels of anxiety. These findings are supported by Wijaya & Purnomo (2017), who reported a significant inverse association between self-confidence and competitive anxiety in athletes.

In addition to self-confidence, motivation is another psychological factor that influences an athlete's mental state. Motivation is an internal or external drive that prompts an individual to engage in an activity in order to achieve a specific goal (Masitoh et al., 2025). In sports, motivation plays a crucial role in enhancing an athlete's enthusiasm for training, discipline, perseverance, and ability to cope with the challenges and pressures of competition (Alim, 2018). Highly motivated athletes are generally better prepared to handle various competition situations because they have a clear focus on the goals they want to achieve. Conversely, low motivation can lead to a decline in mental preparedness and increase the likelihood of anxiety when facing competition (Nugraha et al., 2020).

Various previous studies have shown that psychological factors play an important role in determining athletes' performance during competitions (Yusuf, 2024). However, the majority of previous research has concentrated on adult athletes or specific sports disciplines such as soccer, volleyball, track and field, and taekwondo. Research specifically examining the relationship between self-confidence Sungkowo (2019), motivation, and anxiety in age-group swimmers remains relatively limited. Furthermore, most previous studies have examined the relationship between self-confidence and anxiety, or between motivation and anxiety, separately. Studies that integrate these two psychological variables simultaneously to explain anxiety levels among developmental-age swimmers are still rare.

Given these circumstances, this study provides a new perspective by simultaneously examining the relationship between self-confidence and motivation and their impact on anxiety levels among Age Group 3 swimmers at the Tri Cakti Semesta Swimming Club in Semarang. This study not only identifies the partial relationships between each variable but also analyzes the combined contribution of these two psychological variables to the athletes' anxiety levels. Thus, this study is expected to provide a more comprehensive picture of the psychological factors that influence anxiety in developmental-age swimmers.

Based on the above discussion, the purpose of this study is to analyze the relationship between self-confidence and motivation levels and anxiety levels among swimmers at KU 3 Tri Cakti Semesta in Semarang. Theoretically, the results of this study are expected to enrich the field of sports psychology, particularly regarding the relationship between self-confidence, motivation, and anxiety among young swimmers. Practically, the results of this study are expected to serve as a basis for coaches, sports clubs, and relevant parties in designing effective mental training programs to improve athletes' psychological readiness and support the achievement of optimal athletic performance.

METHOD

The research was designed as quantitative correlation study. The study is scheduled to be conducted in May 2026 and aims to determine the partial and simultaneous relationships between self-confidence (X1) and motivation (X2) and anxiety levels (Y) among KU-3 TCS Semarang swimmers. This study is non-experimental in nature, meaning that the researcher only measures the psychological conditions that naturally exist in the athletes without applying any specific treatments or manipulations in the field (Creswell, 2015). Operationally, self-confidence (X1) represents an athlete's belief in their physical abilities, motivation (X2) represents the drive to achieve, and anxiety (Y) represents an athlete's somatic and cognitive tension leading up to a competition. The relationships among these variables were analyzed to determine the extent to which

the independent variables (X1 and X2) can predict variations in the dependent variable (Y).

This data collection method employed total sampling, which involved selecting the entire group of TCS KU-3 athletes who met the age group criteria, totaling 26 athletes. This method was used because the population meeting the age group criteria was relatively small, allowing the researcher to include all athletes as respondents. The collected data were analyzed using IBM SPSS Statistics version 26. Prior to performing the regression analysis, the data were subjected to classical assumption tests, including normality and multicollinearity assessments. Multicollinearity was evaluated based on the Tolerance and Variance Inflation Factor (VIF) values. The regression model was considered free from multicollinearity when the Tolerance value exceeded 0,10 and the VIF value was below 10. Next, multiple linear regression analysis was used to determine the effects of self-confidence and motivation on the anxiety levels of swimmers. Hypothesis testing was performed using the t-test (partial), the F-test (simultaneous), and the coefficient of determination (R^2) at a significance level of 0.05 (Sugiyono, 2015).

RESULT AND DISCUSSION

Table 1. Descriptive Statistic of the Study Variables

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Self-confidence	26	36	114	93,31	17,28
Motivation	26	21	48	38,54	5,70
Anxiety	26	16	48	29,96	7,92

Table 1 shows the descriptive statistics for the research variables among 26 KU-3 swimmers at TCS Semarang. The athletes had an average self-confidence score of 93.31, with a score range of 36–114 and a standard deviation of 17.26. The average motivation score was 38.54, with a score range of 21–48 and a standard deviation of 5.70. Meanwhile, the average anxiety score was 29.96, with a range of 16–48 and a standard deviation of 7.93. The descriptive statistics present an overview of the distribution of self-confidence, motivation, and anxiety levels among the participating athletes.

Table 2. Result of the Shapiro-Wilk Normality Test

Variabel	Shapiro-Wilk Sig.	Description
Self-confidence	0,002	Non-normal distribution
Motivation	0,058	Normal distribution
Anxiety	0,946	Normal distribution
Standardized Residual	0,747	Normal distribution

Table 2 shows the results of the normality test using the Shapiro-Wilk method for the research variables. The self-confidence variable yielded a p-value of 0.002, which is smaller than the significance level of 0.05; therefore, the data for this variable are not normally distributed. In contrast, the motivation and anxiety variables had p-values of 0.058 and 0.946, respectively, which are greater than 0.05; thus, both variables are normally distributed. Furthermore, the test results for the standardized residuals showed a significance value of 0.747, which is also greater than 0.05. This indicates that the regression model residuals are normally distributed. Thus, even though one of the independent variables is not normally distributed, the normality assumption in the regression model is met because the residuals are normally distributed. Therefore, the multiple linear regression analysis can proceed.

Table 3. Result of the Multicollinearity Test

Variabel	Tolerance	VIF	Description
Self-confidence	0,925	1,081	No multicollinearity
Motivation	0,925	1,081	No multicollinearity

Table 3 shows the results of the multicollinearity test for the independent variables, namely self-confidence and motivation. Both variables have a Tolerance value of 0.925 and a Variance Inflation Factor (VIF) of 1.081. A Tolerance value greater than 0.10 and a VIF value less than 10 indicate that there is no multicollinearity among the independent variables. Thus, self-confidence and motivation are not excessively correlated with each other, making them suitable for joint use in a multiple linear regression model.

Table 4. Model Summary of Multiple Linear Regression Analysis

R	R ²	Adjusted R ²	Std. Error
0.761	0,578	0,542	5,366

Table 4 presents a summary of the results of the multiple linear regression analysis. The correlation coefficient (R) of 0.761 indicates a strong relationship between the variables of self-confidence and motivation and the athletes' anxiety

levels. Meanwhile, the coefficient of determination (R^2) of 0.578 indicates that 57.8% of the variation in the athletes' anxiety levels can be explained by self-confidence and motivation combined. The remaining 42.2% is influenced by other factors outside the scope of the variables studied. After adjusting for the number of independent variables and the sample size, an Adjusted R^2 value of 0.542 was obtained, indicating that the model explains 54.2% of the variation in athletes' anxiety levels.

Table 5. Analysis of Variance for the Multiple Linear Regression Model

F	Sig
15,776	0,000

Table 5 indicates that the simultaneous test produced an F-statistic of 15,776, with p-value of 0,000. A significance level less than 0.05 indicates that the regression model used is statistically significant. These results indicate that self-confidence and motivation together have a significant relationship with the anxiety levels of KU-3 TCS Semarang swimmers. Thus, the regression model constructed is able to adequately explain the relationship between the independent and dependent variables.

Table 6. Results of the Multiple Linear Regression Coefficients Analysis

Variable	B	Beta	t	Sig.
Self-confidence	-0.360	-0.785	-5.577	0,000
Motivation	0.425	0.306	2.172	0.040

The results of the partial test in Table 6 show that the self-confidence variable has a regression coefficient of -0.360, a t-value of -5.577, and a significance level of 0.000. A significance level of less than 0.05 indicates that self-confidence is significantly associated with athletes' anxiety levels. The negative regression coefficient suggests that the higher an athlete's level of self-confidence, the lower their anxiety levels are prior to a competition.

Meanwhile, the motivation variable had a regression coefficient of 0.425, a t-value of 2.172, and a significance level of 0.040. This significance level indicates that motivation also has a significant relationship with athletes' anxiety levels. A positive regression coefficient indicates that an increase in motivation is followed

by an increase in anxiety levels after the effect of self-confidence is controlled for in the regression model.

Based on the unstandardized regression coefficients, the following regression equation was obtained.

$$Y = 47,213 - 0,360X_1 + 0,425X_2$$

The equation shows that a one-unit increase in the self-confidence variable reduces the anxiety score by 0.360 points, while a one-unit increase in the motivation variable increases the anxiety score by 0.425 points, assuming all other variables remain constant.

DISCUSSION

The results of the study indicate that there is a significant relationship between self-confidence and motivation and anxiety levels among KU-3 TCS Semarang swimmers. Regression analysis indicates that these two variables together account for 57.8% of the variation in athletes' anxiety levels ($R^2 = 0.578$), while the remaining 42.2% is influenced by other factors not analyzed in this study, such as competition experience, support from coaches and parents, coping strategies, physical condition, and competitive pressure. These findings indicate that psychological factors contribute significantly to the onset of anxiety in young athletes, particularly in the lead-up to competitions (Widodo et al., 2022).

Self-confidence has a significant negative correlation with anxiety levels ($B = -0.360$; $p < 0.001$). These results indicate that the higher an athlete's level of self-confidence, the lower their perceived anxiety levels. Athletes who are confident in their abilities tend to be better able to manage competitive pressure, maintain concentration, and perform at their best during competitions. Conversely, low self-confidence can lead to self-doubt, thereby increasing anxiety both before and during a competition. This study aligns with the sport psychology model developed by Martens, Vealey, and Burton, which explains that self-confidence is one of the key components associated with reduced competitive anxiety (Craft et al., 2003).

The results of this study are also consistent with research conducted by Sofyan et al. (2024), which showed that the higher an athlete's self-confidence, the

lower the level of competitive anxiety experienced during training. That study confirmed that self-confidence acts as a protective factor that helps athletes cope with psychological pressure leading up to a competition. This study is also similar to research conducted by Kusumadewi et al. (2021), in which high self-efficacy was associated with lower anxiety levels because athletes felt better prepared to face the demands of competition.

In contrast to self-confidence, this study shows that motivation has a significant positive relationship with anxiety levels ($B = 0.425$; $p = 0.040$). These results indicate that an increase in motivation is followed by an increase in anxiety levels after controlling for the effect of self-confidence in the regression model. These findings suggest that motivation consistently has a positive impact on athletes' psychological well-being. However, among young athletes, high motivation is often accompanied by a strong desire to achieve, meet training goals, or fulfill the expectations of coaches and parents. These conditions can increase psychological pressure, leading to heightened anxiety before competitions (O'Rourke et al., 2011).

In addition, research conducted by Afifah et al. (2025) also shows that achievement motivation is an important factor in athletes' ability to meet their goals, but managing psychological pressure remains necessary to prevent motivation from becoming a source of competitive anxiety. The study also emphasizes that a predominance of intrinsic motivation, combined with psychological management strategies, can help athletes maintain their performance during competitions.

Overall, the results of this study indicate that self-confidence is a more dominant predictor than motivation in relation to anxiety levels. This is evident from the standardized beta coefficient for self-confidence ($\beta = -0.785$), which is larger than that for motivation ($\beta = 0.306$). Thus, boosting self-confidence through mental training, match simulations, positive feedback, and gradual competition experience should be prioritized in training programs for young swimmers. On the other hand, motivation should also be guided to remain adaptive so that it does not

turn into pressure that actually increases athletes' anxiety before a competition (Widodo et al., 2022).

Based on the research findings, the training of young swimmers needs to be comprehensive, integrating physical, technical, and psychological aspects. Efforts to boost self-confidence through various forms of mental training such as goal setting, positive self-talk, imagery training, and relaxation techniques can serve as strategies to help athletes manage anxiety leading up to competitions. Thus, well-planned psychological training is expected to support athletes' mental readiness and optimize their performance during competitions.

CONCLUSION

This study shows that self-confidence and motivation were significantly associated with anxiety levels among swimmers at KU-3 TCS Semarang. Together, these two variables account for 57.8% of the variation in the athletes' anxiety levels, while the remaining 42.2% is influenced by other factors outside the scope of this study. Partially, self-confidence has a significant negative relationship with anxiety levels, indicating that athletes with higher levels of self-confidence tend to experience lower levels of anxiety. Conversely, motivation has a significant positive relationship with anxiety levels; thus, high motivation needs to be balanced with effective psychological management to prevent increased pressure leading up to competitions. Therefore, the training of young swimmers should integrate technical, physical, and psychological aspects to help athletes manage anxiety and support optimal performance during competitions.

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