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Self-Confidence Levels and Performance of Gymnasts the Pre-Competition Period

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Abstract

This study aims to analyze the relationship between self-confidence levels and gymnasts' performance in Semarang during the pre-competition period. This study employed a quantitative method using a correlation approach. Purposive sampling was used to select a sample consisting of 16 athletes from Wimilia Gymnastics in Semarang. A questionnaire was used to collect data on the athletes' self-confidence and performance. The Pearson correlation test was used to analyze the data. The results showed that in the normality test, the self-confidence variable had a significance value of 0.080 ($p > 0.05$), while the performance variable had a significance value of 0.649 ($p > 0.05$). The Levene's test for homogeneity yielded a significance value of 0.430, indicating that homogeneity was not violated. The results of the linearity test showed an F-value of 0.426 and a significance value of 0.874. The results of the Pearson correlation test showed that the correlation coefficient between self-confidence and performance was 0.209, with a significance value of 0.436 ($p > 0.05$). It can be concluded that the levels of self-confidence and performance of Semarang City gymnasts during the pre-competition period have a positive relationship but do not have a significant impact.

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INTRODUCTION

Sports are a series of physical activities carried out in a planned and structured manner with the aim of improving, fostering, and developing an individual's physical, mental, and social abilities (Ma'mun, 2016). Sports are divided into three categories: recreational sports, health-oriented sports, and competitive sports. In competitive sports, an athlete's performance is influenced not only by physical ability but also by various psychological factors that play a role in supporting the athlete's readiness and performance during competition. James, as cited in Handayani (2019), states that 50% of a match's outcome is determined by mental and psychological factors. One psychological aspect that can influence an athlete's performance is their level of self-confidence (Ilyas, 2025).

In sports, self-confidence is crucial to an athlete's performance and ability to succeed, and it requires collaboration across physical, technical, and mental aspects (Arifin et al., 2023). An athlete's self-confidence is a strong belief in one's ability to perform at one's best in sports activities—whether in training or competition—even under high-pressure situations (Yuliani & Fitria, 2019). Self-confidence is a critical psychological component that supports athletes' performance during every phase of competition, from the pre-competition phase through the competition itself. If athletes have an optimal level of self-confidence, they can cope with the pressure of competition, stay more focused, and maximize their physical and technical abilities. If they have low self-confidence, they may not be able to maximize their potential, which affects their results. Therefore, athletes with more sports experience tend to be more confident during competition, which is reflected in the quality and consistency of their skill execution during competition (Dirhamzah & Alwi, 2024; Grova et al., 2024).

Athlete performance refers to an athlete's ability to demonstrate the skills, techniques, and strategies learned during training in the context of actual competition. An athlete's performance results from a combination of physical ability, technique, tactics, and mental readiness for competition (Nopiyanto et al., 2022). Harsono as cited in (Lestari & Dewi, 2022) other factors, such as how the competition is organized, the athletes' condition, training strategies, and the role of the coach, can influence the athletes' maximum performance level. Faturochman (2017) states that an athlete's performance is an ideal state achieved through a combination of physical ability and psychological readiness. When these two components work together, athletes can deliver their best performance, surpassing their usual capabilities.

The pre-competition phase begins seven days before the competition and continues until the final moments before the event. During this phase, many athletes face psychological pressures such as stress and anxiety resulting from high expectations and intense competition. This can disrupt their emotional stability and lead to a decline in performance during the competition (Yusuf, 2024). As the competition approaches, athletes often experience anxiety, emotional tension, and intense self-evaluation of their abilities, making their psychological state a determining factor in the success of their performance (Nisa & Jannah, 2021).

Gymnastics is a high-risk sport and can be categorized as an aesthetic sport because athletes' performance depends heavily on their self-expression and self-confidence in the movements they perform (Francisco et al., 2012; Setiawan & Sujarwo, 2022). A gymnast's performance is determined not only by the execution of difficult elements, but also by the combination of movements, music, theme, and artistic elements in a harmonious sequence. In addition, the quality of an athlete's performance is influenced by their ability to communicate and understand the characteristics of the movements (Suominen, 2023). The sport of gymnastics consists of four disciplines: men's artistic gymnastics, women's artistic gymnastics, rhythmic gymnastics, and aerobic gymnastics. Rhythmic gymnastics is a discipline that involves choreography set to selected music, with the goal of conveying emotion and expression through three main aspects: musical accompaniment, artistic visual imagery, and expressiveness (Morgado et al., 2022). In artistic disciplines, both boys and girls share a commonality: the movements they perform serve not only as a series of technical elements but also as a means of conveying meaning through expression and body coordination (De Oliveira et al., 2026). Gymnastics, as a sport based on aesthetics, relies on the body's artistic capabilities, expressiveness, and the beauty of movement as the primary components of an

athlete's performance and evaluation. The physical and psychological demands of these attributes require athletes to be fully prepared for competition.

During the pre-competition phase, many athletes face psychological pressures such as stress and anxiety due to high expectations and intense competition. This is consistent with the findings of Aouani et al. (2024) who noted in their study that a sudden increase in training intensity leads to a greater increase in state anxiety compared to standard training. Self-confidence plays a crucial role as a psychological asset that maintains an athlete's focus, regulates emotions, and enables peak performance. Self-confidence also contributes to an athlete's performance (Nopiyanto et al., 2022).

Hajer Aouani et al. (2024) report that short-term, high-intensity training can increase anxiety without a significant performance improvement, highlighting the importance of designing training loads and recovery strategies leading up to a competition. In addition, Nisa and Jannah (2021) emphasize the importance of developing psychological aspects—particularly self-confidence—to support athletes' performance and mental resilience. Huda & Soedjatmiko (2026) argue that there is no significant relationship between anxiety levels and self-confidence.

Several studies have shown a positive correlation between self-confidence and athletic performance. Sanjaya & Yulisatria (2025) found a positive and significant relationship between self-confidence and competitive performance among futsal players, showing that higher self-confidence was associated with better match performance. Lestari & Dewi (2022) noted that self-confidence and motivation contribute to peak performance, indicating that these psychological factors are crucial for achieving success over other factors. The results of both studies indicate a positive relationship between self-confidence and athletic performance, but this study found that the relationship was not significant. These differing findings suggest that the contribution of self-confidence to performance may vary depending on sample characteristics, sport, sample size, and other variables that influence athletic performance.

METHODS

This study employed a quantitative method with a correlational design to analyze the relationship between self-confidence levels and gymnasts' performance in Semarang, particularly in the period leading up to competitions. A quantitative method was chosen because it uses numerical data and statistical analysis to identify relationships between variables. This method allows researchers to determine the direction and strength of the relationship between athletic performance (the dependent variable X) and self-confidence (the independent variable Y). Furthermore, because self-confidence and athletic performance naturally develop in competitive sports, it is more appropriate to examine them using a correlational approach. Additionally, a correlational design is useful for establishing and exploring possible relationships between variables without manipulating the subjects (Oranga & Matere, 2025; Putri et al., 2025).

The population for this study consisted of gymnasts from Semarang City who are registered with the Wimilia Gymnastics Club, with the criteria being athletes aged ≥11 years with at least one year of structured training experience. The study sample comprised 16 respondents, selected using purposive sampling. Data collection took place one to two weeks before the competition and did not include the competition or post-competition phases, which occurred in May 2026.

This study collected data using a questionnaire that employed a Likert scale. The instrument consisted of the Pre-Competition Self-Confidence Scale (variable X), constructed on a four-point scale, and the Pre-Competition Performance Assessment Sheet (variable Y), constructed on a ten-point scale. Next, the data obtained were analyzed descriptively using categorization analysis, also known as a criterion test. This was done to determine the athletes' levels of self-confidence and their performance based on predetermined categories.

The data analysis technique used in this study involved SPSS version 29, following several testing stages. The first stage began with a normality test using the Shapiro-Wilk test because the sample size was less than 50. In statistics, the Shapiro-Wilk test is a statistical method used to test the assumption of normality of data (Malay, 2022). Next, homogeneity and lin-

earity tests were conducted to determine the existence of a linear relationship between self-confidence and athletic performance. Subsequently, a hypothesis test was performed to determine the relationship between self-confidence levels and the performance of gymnasts from Semarang City during the pre-competition period using Pearson's product-moment correlation. Therefore, the analytical methods used were tailored to the characteristics of the collected data distribution

RESULTS AND DISCUSSION

This study analyzes the relationship between self-confidence and athletic performance in the period leading up to a competition. 16 participants met the criteria: female, aged ≥11 years, with at least one year of structured training experience.

Table 1. Age Distributin Data

Age	N	Presentace
11 Year old	8	50 %
12 Year old	3	18,75 %
13 Year old	4	25 %
15 Year old	1	6,25%
Total	16	100 %

Based on the age distribution table, the research subjects were predominantly in the 11-year-old age group, with 8 individuals (50%), while the lowest frequency was in the 15-year-old age group, with 1 individual (6.25%).

Table 2. Normality Test

Variable	Statistic	df	Sig.	Description
Self-Confidence	0,900	16	.080	Normal
Performance	0,959	16	.649	Normal

The normality test showed that the self-confidence variable had a significance value of 0.080 (p > 0.05), while the performance variable had a significance value of 0.649 (p > 0.05). Since both significance values are greater than 0.05, it can be concluded that the data for both variables are normally distributed.

Table 3. Gomogeneity Test

Test of Homogeneity of Variance		Levene Statistic	df1	df2	Sig.	Description
Performance * Self-Confidence	Based on Mean	0,639	1	30	0,430	Homogeneous

Based on the results of the homogeneity test using Levene's test, a significance value of 0.430 was obtained. Since the significance value is greater than 0.05 (0.430 > 0.05), the results indicate that the variances of the data across groups are homogeneous.

Table 4. Linearity Test

ANOVA Table	Sum of Squares	df	Mean Square	F	Sig.
Performance * Self-Confidence	197.169	9	21.908	.426	.874

Based on the results of the linearity test, an F-value of 0.426 was obtained with a significance value of 0.874. Since the significance value is greater than 0.05 (0.874 > 0.05), it can be concluded that the relationship between self-confidence and athletic performance is linear. Thus, the research data meet the requirements for a Pearson product-moment correlation analysis.

Table 5. Hypothesis Test

	N	Sig.	Correlation Coefficient
Performance - Self-Confidence	16	0,436	0,209

Based on the results of the Pearson Product-Moment correlation test, the correlation coefficient between self-confidence and performance was 0.209, with a significance value of 0.436 ($p > 0.05$). These results indicate a positive relationship with a low correlation coefficient between self-confidence and performance; however, this relationship is not statistically significant. It can be concluded that self-confidence does not have a significant relationship with performance in this study sample.

Based on the analysis of the research data, a positive relationship with a low correlation coefficient was found between self-confidence and gymnasts' performance. This finding indicates that self-confidence is not a major factor influencing athletic performance. This was demonstrated through a correlation test with a significance value of 0.436 ($p > 0.05$) and a correlation coefficient of 0.209. Although there is a tendency for increased self-confidence to be followed by improved performance, the relationship is not strong enough to be considered statistically significant. This is consistent with the research by Lochbaum et al. (2022); the correlation value in this study (0.209) aligns with the results of the meta-analysis ($r = 0.25$), indicating that the relationship between self-confidence and performance tends to be small and is not always strong.

The lack of a significant relationship between self-confidence and performance may also be influenced by the relatively small study sample, meaning the variation in the data collected was insufficient to demonstrate a strong relationship between the variables. While self-confidence does play an important role in enhancing an individual's mental readiness and confidence, in practice, performance is not determined solely by psychological factors. Furthermore, athletic performance results from a combination of interrelated physical, psychological, and environmental factors. This finding may be due to other, more dominant factors in determining performance, such as technical ability, physical condition, training experience, motivation, and the athlete's mental readiness during the activity (Grova et al., 2024; Tangkudung et al., 2025).

The relationship between self-confidence and athletic performance is not always consistent across studies. Limitations in conducting this study include inconsistent attendance among athletes, which resulted in a limited sample size and suboptimal research data. Given the small number of respondents, the positive correlation of 0.209 is not yet statistically significant. As noted by Jekauc et al. (2023) , research with a larger sample size is needed to obtain more consistent and reliable results. Thus, this study indicates that gymnasts or subjects with high levels of self-confidence may not necessarily be able to demonstrate optimal performance if adequate technical skills and physical conditioning do not support them.

CONCLUSION

The results of this study indicate a relatively weak correlation between athletes' self-confidence levels and their performance immediately before a competition. These findings suggest that both factors are more strongly influenced by other factors such as physical ability, physical condition, experience, and the athlete's mental readiness. Given that the athletes in this study were aged 11 years or older, their competitive experience is still minimal. Thus, this study is expected to serve as a basis for evaluation in improving the self-confidence and performance of Semarang City gymnasts during the pre-competition period.

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All authors contributed equally to the conceptualization, methodology, data collection, analysis, and drafting of the manuscript. All authors have read, revised, and approved the final manuscript for publication.

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The authors used Grammarly solely for grammar checking and language refinement during the preparation of this manuscript. No generative AI tools were used for data collection, analysis, or content creation. All scientific findings and conclusions were generated and verified entirely by the authors.

CONFLICT OF INTEREST STATEMENT

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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