



The Correlation of Self-Confidence, Concentration, and Goal Setting with Routine Training Scores among Archery Athletes at BPPLOP Central Java

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Abstract

In sports, there are several contributing factors including physical, technical, and psychological aspects. Among these, psychological factors particularly an athlete's mental abilities play a significant role in performance. This study aims to examine the relationship between self-confidence, concentration, and goal setting on routine training scores. This research employed a test survey with a correlational approach and a cross-sectional design, meaning data was collected at one point in time. The sample consisted of 15 athletes, selected using a total sampling technique. The instruments used to collect data included: (1) Self-Confidence Scale, (2) Grid Concentration Test (GCT), (3) Goal Setting Scale, and (4) Training Score records. The results showed a strong and positive correlation between self-confidence, concentration, and goal setting with routine training scores. Specifically, self-confidence had a significant correlation with training scores (Sig. 2-tailed = 0.004), concentration (Sig. 2-tailed = 0.000), and goal setting (Sig. 2-tailed = 0.025). Furthermore, the combined influence of self-confidence, concentration, and goal setting on training scores was also significant, with a Sig. F Change value of 0.000 and an R square (R^2) of 0.852. This indicates that 85.2% of the variance in training scores can be explained jointly by these three variables. The study concludes that self-confidence, concentration, and goal setting are significantly and simultaneously associated with routine training scores. The development of psychological aspects such as self-confidence, the ability to focus, and structured training goals is a crucial part of athlete development, particularly for archers in the BPPLOP Archery Program of Central Java, in order to achieve optimal training outcomes.

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INTRODUCTION

Archery is one of the sports contested in international sporting events such as the Olympics (I Gustie Citra Ary Wijaya, Roy Try Putra, and Andri Wahyu Utomo 2021). In archery, particularly in Indonesia, there are four rounds/divisions: national, compound, recurve, and barebow. Only the compound and recurve divisions are contested up to the world championships and the Olympic Games, while the national and barebow divisions are limited to national-level competitions such as the National Sports Week (PON) (Almunawar et al. 2020).

Archery is a sport that requires consistency to achieve high accuracy or precision in hitting the target in order to score the highest points (Hardi and Dinar Nurama 2016). Archery also involves several aspects, including physical, technical, and psychological components. From a physiological perspective, archers may exhibit signs of mental changes such as tension, fear, and haste, which can lead to performance changes during competition (Warjito, Nurrohmat 2022).

The development of athletic performance and physical health has a significant impact on an athlete's mental condition, and psychological factors also influence the process of achieving physical fitness and effective training (Triananda, Syafrial, and Nopiyanto 2021). In sports, several factors play a role, including physical, technical, and psychological aspects. Psychological factors, particularly an athlete's mental abilities, greatly affect performance. Findings from research and academic studies in this field can serve as valuable evaluations for coaches in managing teams and athletes (Lestari and Dewi 2022).

Every athlete must be supported by a strong mental structure to achieve optimal

performance. Coaches play a crucial role in planning training programs as well as managing the athlete's psychological condition before and after competitions (Fatahilah and Firlando 2020). Psychology plays an important role in enhancing an athlete's emotional intelligence, one of its key components being self-confidence.

Self-confidence includes several aspects such as a sense of security, independence, ambition, self-orientation, and belief in one's own abilities. Individual characteristics serve as the foundation for developing self-confidence and maintaining a realistic self-perception during various situations, according to Sieler (as cited in Putri et al. 2015). Self-confidence is a crucial psychological aspect that significantly contributes to an athlete's performance. Athletes with a high level of self-confidence tend to exhibit greater achievement motivation and strong mental resilience, enabling them to cope with competitive pressure and maintain focus during competitions.

According to Weinberg and Gould (1995), an athlete's performance on the field influences self-confidence, which is defined as belief in oneself (Elhaqe, Sungkowo, Kriswantoro, and Sidik Permono 2021). In addition, concentration is one of the key factors that supports athletic achievement. According to Lauster (1978), self-confidence is an attitude or feeling of assurance in one's abilities, which is not associated with actions taken without experiencing anxiety (Aguss and Fahrizqi 2020). Sieler (as cited in Putri et al. 2015) defines self-confidence as a personal construct characterized by the ability to maintain a realistic and positive perspective on current situations.

According to Gunawarsa 2008:89 "concentration is a crucial ability that allows attention to be focused on the game with all its complexities, as well as on the tactics or strategies to perform at one's best."

Concentration refers to the activity of directing attention toward a specific goal to be achieved (Fatahilah and Firlando 2020). Moreover, concentration is a skill that is very difficult for athletes to master, as their attention—controlled by the brain—often shifts due to new stimuli (Hardi and Dinar Nurama 2016).

According to Nasution 1996 (dalam Saifulloh et al. 2024) concentration plays an important role in sports. According to Satiadrama 2000:224 (as cited in Fatahilah and Firlando 2020) “concentration is an essential aspect in sports, not only during competitions but also during training”. In archery, concentration is a highly dominant and influential factor in athletic performance, as it enables athletes to control themselves and focus when aiming and releasing arrows at the target (Putri et al. 2015).

According to Locke and Latham 1990 (dalam Retno Sari 2021) setting clear and challenging goals can enhance motivation, performance, and individual achievement. Locke and Latham's theory, known as Goal-Setting Theory, emphasizes that goals which are specific, challenging, supported by strong commitment, accompanied by feedback, and based on task complexity are more effective in improving individual performance. With proper goal setting, athletes not only have a clear roadmap for their training and preparation process, but also experience increased motivation and self-confidence to achieve their predetermined targets—namely, high performance and achievement.

Goal setting can strengthen an athlete's mental resilience and help manage emotions, maintain focus, and overcome failure during competitions (Rony Syaifulla et al. 2024). An athlete with established goals can remain consistent and responsible in striving for achievements in their sport (Fachrezi, Vidyastuti, and Lestari 2023). Goal setting is not only essential for

athletes, but also for coaches, who must clearly understand the objectives to be achieved. Setting goals can enhance athletes' cognitive and affective responses throughout the achievement process, which can be effectively monitored by the coach (Nurkholis 2017).

METHODS

This study employed a test survey using a correlational approach with a cross-sectional design, in which data were collected at a single point in time. The population of this study consisted of archery athletes from BPPLOP Central Java. The total population included 15 athletes, all of whom were used as the sample for this study. The sampling technique applied was total sampling.

The data were collected using questionnaires to obtain information on self-confidence, concentration, goal setting, and routine training scores.

Data collection was conducted using questionnaires or tests with four research instruments, including: 1) Self-Confidence Scale, 2) Grid Concentration Test (GCT), 3) Goal Setting Scale, and 4) Training Score.

The self-confidence instrument was adopted and developed from (Elhaque, Sungkowo, Kriswantoro, and Permono 2021) consisting of 15 questions designed to measure the level of self-confidence in sports as perceived by athletes. This questionnaire uses a nine-point Likert scale model aimed at measuring each item. The instrument has a validity coefficient of 0.361 and a reliability coefficient of 0.925.

The concentration instrument, the Grid Concentration Test (GCT), was developed by Harris & Harris (1894), Martens (1933), and Heinen (2011). This measurement tool was adopted from (Taufik 2019) with reliability tested using the test-retest method, yielding a product-moment correlation of $r = .79$ ($p < .05$).

The concentration instrument, the The goal-setting instrument was developed by the researcher in the form of a questionnaire consisting of 10 items. It was tested and found to have a validity coefficient of 0.361 and a reliability coefficient of 0.813. However, one of the items was found to be invalid during the validity testing and was therefore excluded from the final questionnaire used in the study.

The archery test was conducted at a distance of 50 meters for the compound division and 70 meters for the recurve division. The results were based on three routine training scores, and the average (mean) score was calculated. Scoring was carried out once a week.

Data analysis was performed using SPSS 25. This study employed simple correlation tests and multiple correlation tests.

RESULTS AND DISCUSSION

This study aims to examine the relationship between self-confidence, concentration, and goal setting with routine training scores among archery athletes at BPPLOP Central Java. A total of 15 athletes participated in this study. Data were collected using a self-confidence questionnaire, the Grid Concentration Test (GCT) for concentration, a goal-setting questionnaire, and routine training scores. All instruments used in this study had been tested for validity and reliability, ensuring that the data obtained were trustworthy and suitable for further analysis. Prior to conducting the correlation analysis, prerequisite tests such as normality, linearity, and multicollinearity tests were performed to ensure that the data met the assumptions for parametric statistical analysis. The following are the prerequisite tests and hypothesis testing results:

	Shapiro-Wilk		
	Statistic	df	Sig.
Kepercayaan Diri (X1)	0.964	15	0.768
Konsentrasi (X2)	0.926	15	0.239
Goal Setting (X3)	0.975	15	0.921
Skor Latihan Rutin	0.985	15	0.991

Tabel 2. Normality Test Results

The data above consist of 15 athletes. Based on the results obtained, the significance value for the self-confidence variable is $0.768 > 0.05$, for the concentration variable is $0.239 > 0.05$, for the goal-setting variable is $0.921 > 0.05$, and for the routine training score variable is $0.991 > 0.05$. Based on these values, the data in this study can be considered normally distributed.

Tabel 3. Linearity Test

	Deviation from Linearity	
	df	Sig.
Skor Latihan Rutin * Kepercayaan Diri	12	0.156
Skor Latihan Rutin * Konsentrasi	10	0.280
Skor Latihan Rutin * Goal Setting	10	0.859

Based on Table 4, the significance value (Sig.) for Deviation from Linearity in the self-confidence variable with routine

training scores is $0.156 > 0.05$. The significance value for Deviation from Linearity in the concentration variable with routine training scores is $0.280 > 0.05$. The significance value for Deviation from Linearity in the goal-setting variable with routine training scores is $0.859 > 0.05$. Therefore, it can be concluded that the assumption of linearity is met.

Tabel 4. Multicollinearity Test

	<i>Collinearity Statistics</i>	
	<i>Tolerance</i>	<i>VIF</i>
Kepercayaan Diri	0.763	1.311
Konsentrasi	0.756	1.322
Goal Setting	0.871	1.148

Based on Table 4 the self-confidence variable has a tolerance value of $0.763 > 0.100$ and a VIF value of $1.311 < 10.00$. The concentration variable has a tolerance value of $0.756 > 0.100$ and a VIF value of $1.322 < 10.00$, while the goal-setting variable has a tolerance value of $0.871 > 0.100$ and a VIF value of $1.148 < 10.00$. Based on these values, it can be concluded that there is no indication of multicollinearity.

Tabel 5. Simple Correlation Test

	<i>Correlations</i>		
	<i>N</i>	<i>r</i>	<i>Sig.(2-tailed)</i>
Kepercayaan Diri * Skor Latihan Rutin	15	0.701	0.004
Konsentrasi * Skor Latihan Rutin	15	0.794	0.000
Goal Setting * Skor Latihan Rutin	15	0.575	0.025

Based on Table 5 above, the Pearson correlation calculation shows a correlation coefficient (r) of 0.701, indicating a strong

and positive relationship between self-confidence and routine training scores. The significance value (Sig. 2-tailed) is $0.004 < 0.05$, which means the relationship is statistically significant. This indicates that the higher the athlete's self-confidence, the higher their routine training score.

The Pearson correlation result also shows a correlation coefficient (r) of 0.794, indicating a strong and positive relationship between concentration and routine training scores. The significance value (Sig. 2-tailed) is $0.000 < 0.05$, which means the relationship is statistically significant. This indicates that an increase in concentration tends to be followed by an increase in the athlete's routine training scores.

Regarding goal setting and routine training scores, the Pearson correlation result shows a correlation coefficient (r) of 0.575, indicating a strong and positive relationship between these variables. The significance value (Sig. 2-tailed) is $0.025 < 0.05$, which means the relationship is statistically significant. This suggests that athletes who engage in goal setting are more likely to achieve higher routine training scores.

Tabel 5. Multiple Correlation Test

	<i>Change Statistics</i>			
	<i>R</i>	<i>R²</i>	<i>F</i>	<i>Sig. F Change</i>
Kepercayaan Diri (X1), Konsentrasi (X2), Goal Setting (X3) * Skor Latihan Rutin (Y)	0.923	0.852	21.042	0.000

Based on Table 4 above, the results of the multiple correlation analysis show that the calculated correlation coefficient (R) is

0.923, and the coefficient of determination (R^2) is 0.852. After conducting multiple correlation analysis using the F-test for regression, the calculated F-value is 21.042. The significance value of the F Change is $0.000 < 0.05$, indicating a statistically significant relationship between self-confidence, concentration, and goal setting with routine training scores among BPPLOP Central Java archery athletes.

CONCLUSION

Based on the research findings, it can be concluded that there is a significant relationship between self-confidence, concentration, and goal setting with routine training scores among BPPLOP Central Java archery athletes. These findings indicate that each variable contributes positively—meaning the higher the athlete's self-confidence, concentration, and goal setting, the higher their routine training scores. Therefore, the development of psychological aspects such as self-confidence, the ability to focus or concentrate, and training goal planning becomes a crucial part of the athlete development process, especially for archers, in order to achieve optimal training outcomes. Thus, improvements in athletes' psychological aspects will lead to stronger and more positive performance and results.

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