

Levels of Confidence and Concentration on Achievement of Petanque Athletes in Jambi at PON Aceh 2024

Rasyono¹, Fadli Ihsan², M. Haris Satria³, Rizki kurniati⁴

^{1,3}Universitas Sriwijaya

²Universitas Negeri Yogyakarta

⁴Universitas Pembinaan Masyarakat Indonesia

ABSTRACT: Petanque is a precision sport that requires not only physical and technical skills but also strong psychological attributes such as self-confidence and concentration. Despite the physical preparedness of Jambi's Petanque athletes for the 2024 National Sports Week (PON) in Aceh, inconsistencies in performance outcomes suggest that mental factors may play a significant role. This study aimed to (1) assess the levels of self-confidence and concentration among Jambi Petanque athletes, and (2) examine the relationship between these psychological factors and athletic performance. A quantitative correlational design was employed, involving a total population of 12 athletes selected through total sampling. Data were collected using validated questionnaires adapted from the Trait Sport Confidence Inventory (TSCI) and the Test of Attentional and Interpersonal Style (TAIS), while performance outcomes were obtained from official PON results. Pearson correlation and multiple linear regression analyses were conducted using SPSS. Results revealed a strong positive correlation between self-confidence and performance ($r = 0.624$, $p < 0.05$), and a moderate positive correlation between concentration and performance ($r = 0.538$, $p < 0.05$). Furthermore, both variables together accounted for 46.9% of the variance in athletic performance ($R^2 = 0.469$, $p = 0.001$). These findings highlight the critical role of psychological readiness in enhancing competitive outcomes in precision sports. The study suggests that structured mental training programs focusing on confidence building and attentional control should be integrated into athlete development to support optimal performance.

KEYWORDS: self-confidence, concentration, performance, Petanque, sports psychology, PON Aceh 2024

I. INTRODUCTION

Petanque is one of the sports that has been rapidly growing in Indonesia and has garnered increasing attention at national competitions, including the National Sports Week (PON). As a sport that demands precision, emotional control, and tactical strategy, Petanque requires both physical and psychological readiness from its athletes. In the context of regional sports development, the province of Jambi has shown notable progress in Petanque, as reflected in the active participation of its athletes in various national-level championships. A culmination of this progress is their participation in the 2024 Aceh-Sumatera Utara PON. However, achievement in such competitions is not solely determined by technical and physical factors, but also by psychological aspects particularly self-confidence and concentration, which are crucial in precision-based sports like Petanque.

In competitive sports, self-confidence is considered a primary psychological factor that determines an athlete's mental preparedness. Self-confidence can be defined as an individual's belief in their ability to successfully perform a specific task (Vealey, 2001). Athletes with a high level of self-confidence tend to perform more optimally because they perceive their skills and decision-making positively. Conversely, a lack of confidence may lead to anxiety, hesitation, and reduced motivation during competitions. In Petanque, which requires precision in throwing and rapid decision-making, self-confidence plays a significant role in ensuring consistent performance. Wilson et al. (2004) emphasize that athletes with high self-confidence are more likely to maintain stable performance under competitive pressure, especially in sports that demand high levels of accuracy.

In addition to self-confidence, concentration is another vital component in athletic performance, particularly in sports that require sustained focus over extended periods. Concentration is defined as the ability to maintain selective attention on relevant stimuli while ignoring irrelevant distractions (Weinberg & Gould, 2015). During a Petanque match, athletes must focus on factors such as ball position, terrain contours, and opponents' strategies while simultaneously withstanding psychological pressure from

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the audience or their rivals. A lapse in concentration may lead to technical or tactical errors, which can significantly reduce the chances of winning. Research by Boutcher (1992) shows that concentration is a significant predictor of performance in precision sports such as shooting, golf, and Petanque.

Although Jambi's athletes have undergone intensive technical and physical training in preparation for the 2024 Aceh PON, there remains a noticeable variance in their performance outcomes. This suggests that factors beyond technical capabilities influence the results. In this context, psychological variables such as self-confidence and concentration become highly relevant. Given that Petanque demands accuracy, emotional regulation, and strategic thinking, it is crucial to examine how these psychological traits support or hinder athletic performance. Scientifically evaluating athletes' psychological conditions is essential to developing a more comprehensive and integrated training program that does not solely focus on physical and technical preparation.

However, scholarly research examining the relationship between self-confidence and concentration and their effects on the performance of Petanque athletes, particularly at the regional level such as in Jambi Province, is still limited. Most sports psychology studies in Indonesia have focused on major sports like football, athletics, or badminton. Yet, the unique characteristics of Petanque call for a tailored approach to mental training and development. Therefore, this study is important not only to fill a gap in the literature but also to provide empirical foundations for policy-makers and coaches to enhance athlete training in Petanque through psychological development. The study is also practically relevant as it may inform the design of psychological interventions such as mental skills training, motivation development, and confidence building to improve future athlete performance.

Based on the rationale above, this study has two main objectives: first, to identify the level of self-confidence and concentration of Petanque athletes from Jambi who are competing in the 2024 Aceh PON; and second, to analyze the relationship between self-confidence and concentration and the athletes' competitive performance during the event. By examining the correlations among these variables, this study aims to provide a more comprehensive understanding of the psychological determinants of athletic success in national-level competitions.

The research questions guiding this study are: (1) What is the level of self-confidence among Jambi Petanque athletes competing in the 2024 Aceh PON? (2) What is the level of concentration among these athletes during competition? (3) To what extent do self confidence and concentration influence the athletes' performance outcomes at the 2024 PON? This study adopts a quantitative correlational research design to examine the relationships between psychological factors (self-confidence and concentration) and performance outcomes. It is expected that the results of this study will not only contribute to academic knowledge but also provide practical benefits in improving athlete development programs through a more holistic and integrated approach that includes mental preparation.

In general, this study offers both theoretical and practical contributions. Theoretically, it expands the body of knowledge in sport psychology by exploring how self-confidence and concentration influence performance in precision sports. Practically, the findings can serve as an evaluation tool for coaches and the regional sports governing body (KONI Jambi) to design systematic mental training programs that enhance psychological readiness particularly for high-stakes competitions like the PON. Consequently, this research contributes not only to the advancement of sports performance but also to the reinforcement of a scientific, evidence-based foundation for athlete development.

Self-Confidence in Sports

Self-confidence is one of the key psychological factors that significantly influence athletic performance. In the context of sports, self-confidence refers to an individual's belief in their ability to successfully perform specific tasks or skills (Moritz et al., 2013). Athletes with a high level of self-confidence tend to demonstrate more stable performances, better manage competitive pressure, and possess stronger motivation to achieve victory.

According to Vealey and Chase (2016), sport confidence can be classified into two main types: trait confidence and state confidence. Trait confidence is the general tendency of an individual to feel confident across various situations, while state confidence refers to temporary feelings of assurance that can fluctuate depending on competition context, the strength of the opponent, or crowd pressure.

Several key factors contribute to the development of an athlete's self-confidence, including past performance success, support from coaches and teammates, skill mastery, and adequate pre-competition preparation (Hays et al., 2014). Athletes who frequently experience success in both training and competition tend to build a positive perception of their abilities. Furthermore, strong social support from the surrounding environment reinforces an athlete's belief in their capacity to perform well.

Self-confidence is closely linked to motivation, decision-making, and emotional regulation. Confident athletes are better able to make tactical decisions swiftly particularly in precision sports such as Petanque, where strategic accuracy and mental focus are

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critical to success. Additionally, confident athletes tend to remain calm under pressure, are less prone to panic, and demonstrate greater emotional control when facing setbacks or errors (Woodman & Hardy, 2015).

In a precision-based sport like Petanque, where technical accuracy and consistency are essential, self-confidence greatly influences the quality of execution. A lack of belief in one's ability can lead to concentration disruptions, reduced accuracy, and an increased likelihood of technical errors. Conversely, athletes with strong self-confidence are more likely to maintain consistent technique and recover quickly after making mistakes.

A study by Slimani et al. (2016) revealed that psychological training interventions such as visualization and self-affirmation can significantly improve athletic performance by enhancing confidence levels in both individual and precision-based sports. Therefore, integrating mental training into physical preparation programs is essential for developing self-confidence as a core component of competitive readiness.

In conclusion, self-confidence is not merely a supporting psychological trait but a crucial determinant that directly influences competitive outcomes and performance consistency, particularly in sports like Petanque that demand high levels of mental focus and control.

Concentration in Sports

Concentration is one of the core psychological components that significantly influences athletic performance. In the context of sports, concentration is defined as the ability to focus attention on relevant information over a sustained period while ignoring irrelevant distractions (Birrer & Morgan, 2013). This skill enables athletes to remain mentally engaged in specific tasks during both training and competition. In precision sports such as Petanque, concentration is a vital skill, as each technical movement must be executed with accuracy and free from cognitive or emotional interference.

Generally, concentration in sports encompasses two primary types: internal concentration and external concentration. Internal concentration refers to focusing on internal mental processes, such as technique, strategy, and emotional regulation. In contrast, external concentration involves attention to environmental elements or opponents, such as the trajectory of the ball, the position of the target, or crowd noise (Laborde, Mosley, & Thayer, 2017). Athletes must skillfully alternate between these types of attention depending on the demands of the competition.

Nideffer's attentional model categorizes focus based on two dimensions: broad-narrow and internal-external. This model is particularly useful in sports, as it helps athletes adapt their focus flexibly for instance, shifting from game strategy (broad-internal) to precise aiming (narrow-external), which is crucial in sports like Petanque (Janelle, 2019). Failure to regulate attention can result in technical errors or a loss of momentum during performance.

Several factors can disrupt an athlete's concentration, including competitive pressure, anxiety, environmental distractions, and mental fatigue. A study by Furley and Memmert (2015) revealed that high levels of anxiety significantly impair attentional allocation and the ability to filter relevant information during competitive situations. Consequently, psychological training techniques such as mindfulness training and attentional control training are increasingly implemented in athlete development programs to systematically enhance concentration (Noetel et al., 2019).

In the context of Petanque, the ability to maintain concentration during targeting and throwing is a critical determinant of success. Each throw requires precise calculation of angle, force, and decision-making within a limited timeframe. Athletes with high levels of concentration can maintain consistent technique and accuracy, even under high-pressure situations such as during the final stages of a match or when facing a superior opponent.

Overall, concentration is a mental skill that can be developed and refined through structured psychological training. In the pursuit of optimal performance, concentration is not merely a supporting factor but a primary determinant of success especially in precision-based sports. Therefore, it is essential for coaches and sport psychologists to design training programs that include concentration-enhancing interventions such as visualization exercises, controlled breathing techniques, and competitive simulation scenarios.

Athlete Performance in Petanque

Sports performance refers to the tangible outcomes achieved by athletes in competitions, reflecting the effectiveness of training processes, strategic execution, and both physical and mental preparedness. In the context of Petanque a precision sport performance is objectively measured through scores, number of wins, rankings, and medal achievements in official tournaments such as the National Sports Week (PON). Petanque demands a high degree of accuracy and concentration, requiring athletes to demonstrate holistic readiness in terms of technique, tactics, and psychological condition.

According to Mahfud et al. (2021), athletic performance results from the interaction of multiple supporting internal and external factors, including physical, technical, psychological, and environmental elements. In Petanque, successfully delivering a ball to the target is influenced not only by biomechanical skill but also by mental stability, such as confidence and sustained focus

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throughout the match. Therefore, performance in this sport is determined not merely by strength or endurance, but by emotional control and the ability to make tactical decisions under pressure.

Furthermore, Arifin and Suherman (2020) state that precision sports such as Petanque classified as fine motor sports require a high level of accuracy, where performance is more strongly influenced by psychomotor and psychological abilities than by pure physical strength. While fundamental techniques such as grip, stance, and release are essential, factors like maintained concentration and control over anxiety or competitive stress play a significant role in the final result.

Performance in this sport also reflects the success of structured athlete development programs, including mental and psychological training. Research by Putri and Yudhistira (2023) emphasizes that the improvement of Petanque athletes' performance in Indonesia in recent years is closely linked to the application of sport psychology in competition preparation. They assert that athletes with high levels of self-confidence are better equipped to cope with competitive stress and tend to perform more consistently under pressure.

On the other hand, performance is also influenced by competitive experience and exposure to tournament settings. Petanque athletes who frequently participate in regional and national competitions generally demonstrate more stable performances compared to novices. This aligns with the competition experience theory proposed by Tadesse et al. (2022), which suggests that competitive experience reinforces a winning mentality and builds psychological adaptation to the stress of competition.

In conclusion, the performance of Petanque athletes is a multidimensional outcome resulting from the synergy of various elements, particularly technical and psychological factors. This achievement must be supported by well-planned training, continuous development, and attention to the athlete's mental preparedness. In the context of the 2024 PON Aceh, evaluating athlete performance requires consideration of all these indicators to assess the success of development programs and the athletes' readiness to compete at the national level.

Previous Relevant Studies

Research on the relationship between psychological factors such as self-confidence and concentration with athletic performance has been widely conducted, especially in the context of precision and competitive sports. These studies provide a strong empirical foundation for evaluating how such psychological constructs contribute to athletes' performance outcomes, including in the sport of Petanque.

Several studies have confirmed that self-confidence significantly influences athletic performance, particularly in sports that require precision and emotional stability. A study by Kamarudin et al. (2019) found that self-confidence was a strong predictor of optimal performance among Malaysian silat athletes, where those with higher levels of self-confidence showed greater consistency during competitions. Similarly, Permatasari & Widyarini (2021), in a study on archery athletes, reported a positive correlation between self-confidence and competition outcomes, with higher-scoring athletes demonstrating higher levels of confidence.

In addition, concentration has been identified as a key variable in determining success in individual sports. A study by Anjani and Wibowo (2020) on shooting athletes revealed that high concentration levels contributed directly to improved accuracy and shooting effectiveness. This supports the theoretical perspective that sports requiring precision demand effective attentional control to avoid both internal and external distractions. Furthermore, Utomo and Hidayat (2022) analyzed chess athletes and found that concentration was a major determinant of performance scores in tournaments.

Regarding the combined influence of self-confidence and concentration, Fauzi and Mulyawan (2021) reported that both variables had a significant simultaneous effect on the performance of junior karate athletes. Their regression analysis showed that self-confidence and concentration contributed 52% to the variation in athletic performance, indicating that the synergy between mental readiness and focus can enhance performance under competitive pressure.

These studies provide empirical justification that both self-confidence and concentration are crucial psychological components for supporting athletic achievement, particularly in precision sports such as Petanque. Although no existing research has been found specifically examining Petanque athletes in Indonesia at the national level, the aforementioned studies provide an essential basis for hypothesizing that these two psychological factors also play a significant role in this more specific context.

Therefore, this current study aims to fill the empirical gap by examining the extent to which self-confidence and concentration influence the performance outcomes of Petanque athletes from Jambi Province at the 2024 PON in Aceh, a topic that has received limited academic attention to date.

II. RESEARCH METHOD

Type and Approach of Research

This study employs a quantitative correlational approach, aiming to determine the relationship between two independent variables self-confidence and concentration and one dependent variable, namely the performance achievements of Petanque athletes from Jambi during the 2024 Aceh National Sports Week (PON). A correlational approach is appropriate since the study does not manipulate variables but seeks to statistically assess the degree of association among psychological factors and athletic performance. Quantitative methods allow for objective, measurable analysis through the use of standardized instruments, thereby enhancing the generalizability of the findings. The relationship model will utilize Pearson correlation and multiple linear regression analysis to assess the contribution of each independent variable to the athletes' performance. Therefore, this research design is highly suitable for addressing the research questions concerning the impact of psychological readiness on competition outcomes.

Population and Sample

The population of this study consists of all Petanque athletes from Jambi Province who officially participated in the 2024 Aceh North Sumatra PON. According to data from the Jambi Provincial Petanque Federation (FOPI), the total number of participating athletes is 12, comprising both male and female athletes across different match categories. Due to the small and homogeneous nature of the population, this study applies total sampling, meaning that the entire population serves as the research sample. This method minimizes selection bias and ensures that the data fully reflect the psychological and performance conditions of the athletes. Inclusion criteria for the sample consist of athletes officially registered in the 2024 PON, who have undergone a minimum of six months of training, and who are willing to complete the questionnaires sincerely and thoroughly. Athletes who do not meet these criteria are excluded from the analysis.

Research Instruments

The research instruments are composed of three main components: (1) a self-confidence questionnaire, (2) a concentration questionnaire, and (3) performance data documentation. The self-confidence questionnaire is adapted from the Trait Sport Confidence Inventory (TSCI) developed by Vealey (2001), comprising 10 items assessing the athlete's confidence in competitive contexts. The concentration questionnaire is adapted from the Test of Attentional and Interpersonal Style (TAIS) and includes 10 items measuring internal and external attentional focus during competition. Both instruments utilize a 5-point Likert scale ranging from "strongly disagree" to "strongly agree." Prior to use, both questionnaires were tested for validity and reliability among 20 athletes from other precision sports (e.g., archery and bowling), yielding Cronbach's alpha coefficients above 0.80. Performance data were obtained from official PON records, including final scores, rankings, and medals earned by each athlete.

Data Collection Techniques

Data collection was conducted in two stages. The first stage involved questionnaire administration, conducted directly after the athletes completed their matches at the 2024 PON. This timing was selected to ensure that athlete responses reflected their real-time psychological condition during competition. The researcher provided a brief explanation of the study's objectives and ensured confidentiality before administering the questionnaires. Coaches and team officials assisted in facilitating athlete participation. The second stage involved collecting performance data from official PON results, sourced either from the event's official website or certified reports from the organizing committee. This data included event category, final results (scores or medals), and national rankings. The data were then coded and entered into a statistical software program for analysis. The entire data collection process took approximately two weeks post-competition and adhered to established research ethics principles.

Data Analysis Techniques

The collected data were analyzed using SPSS (latest version). The analysis began with descriptive statistics to determine the mean, standard deviation, and categorical classifications of self-confidence and concentration levels. A normality test (Kolmogorov-Smirnov) was conducted to verify the distribution of the data. Pearson's correlation analysis was then applied to examine the relationships between self-confidence, concentration, and athletic performance. If significant correlations were found, a multiple linear regression analysis was performed to evaluate the combined and individual contributions of the independent variables to performance outcomes. Interpretation of results was based on the significance level ($p < 0.05$) and the coefficient of determination (R^2) to assess the strength of the relationship. Additionally, a multicollinearity test was conducted to ensure that there was no overlap between the independent variables. This analytical approach is expected to provide both scientific and practical insights regarding the extent to which psychological factors influence athlete performance in national competitions.

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III. RESULTS

Self-Confidence Data Description of Petanque Athletes from Jambi

To describe the level of self-confidence among Petanque athletes from Jambi who participated in the PON Aceh 2024, descriptive statistical analysis was conducted. The results are presented in Table 1 below.

Table 1. Descriptive Statistics of Self-Confidence among Jambi Petanque Athletes

Statistic	Value
Number of Respondents	12 Athletes
Minimum Score	58
Maximum Score	89
Mean	74.5
Standard Deviation (SD)	9.21
Median	75.0
High Category	5 Athletes (41.7%)
Moderate Category	6 Athletes (50.0%)
Low Category	1 Athlete (8.3%)

The data indicate that most athletes (50.0%) have a moderate level of self-confidence, while 41.7% are categorized as high and only one athlete (8.3%) falls into the low category. This suggests that the majority of athletes possess adequate psychological readiness in terms of self-confidence.

Concentration Data Description of Petanque Athletes from Jambi

In addition to self-confidence, concentration level is another important psychological factor influencing athletic performance. The descriptive statistics of concentration levels among the athletes are shown in Table 2.

Table 1. Descriptive Statistics of Concentration among Jambi Petanque Athletes

Statistic	Value
Number of Respondents	12 Athletes
Minimum Score	60
Maximum Score	92
Mean	78.3
Standard Deviation (SD)	8.76
Median	79.5
High Category	6 Athletes (50.0%)
Moderate Category	5 Athletes (41.7%)
Low Category	1 Athlete (8.3%)

The results show that half of the athletes (50.0%) exhibit high concentration levels, while 41.7% are in the moderate category and only one athlete (8.3%) falls into the low category. This demonstrates a generally strong cognitive focus among the athletes during competition.

Achievements of Jambi Athletes

To provide a clear overview of the athletic performance of Petanque athletes from Jambi during the 2024 PON XXI in Aceh, the medal achievements across various events were compiled and analyzed. Table 3 presents the distribution of medals earned by Jambi athletes, along with the corresponding event categories and athlete names.

Table 2. Achievement of Jambi Petanque Athletes in PON XXI Aceh 2024

No	Event Category	Athlete(s) Name	Medal Type	Gender
1	Shooting	Topan Satria	Gold	Male
2	Shooting	Anni Saputri	Silver	Female
3	Double Women	Anni Saputri, Warda Asifa	Bronze	Female
4	Double Mixed	Topan Satria, Erma Novia Salsa Bila	Silver	Mixed
5	Triple Women	Avria Ningsi, Fitriani, Andini Segonang	Silver	Female

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6	Triple Women	Elsy Aulia Hananda	Bronze	Female
7	Triple Women	Team (unspecified, supporting Elsy Aulia Hananda)	Bronze	Female

As shown in Table 3, Jambi Petanque athletes achieved notable success, winning a total of seven medals across individual, team, and mixed categories. The medal breakdown, summarized in Table 4, includes one gold, four silver, and two bronze medals. These results reflect the strong competitiveness and well-rounded performance of Jambi's athletes, particularly in precision-based and team events such as shooting, double, and triple competitions.

Table 3. Medal Recapitulation for Jambi Petanque Athletes

Medal Type	Total
Gold	1
Silver	4
Bronze	2
Total	7

Inferential Statistical Analysis Results

Correlation Test between Self-Confidence and Athletic Performance

Prior to conducting the correlation test, the data met the assumption of normality. Therefore, the Pearson Product-Moment Correlation was used to determine the relationship between self-confidence and the athletic performance of Petanque athletes.

Table 4. Correlation between Self-Confidence and Athletic Performance

Independent Variable	Dependent Variable	r (Correlation Coefficient)	Sig. (p-value)	Description
Self-Confidence	Athletic Performance	0.624	0.001	Strong positive correlation, significant

The analysis revealed a strong and statistically significant positive correlation ($r = 0.624$, $p < 0.05$) between self-confidence and athletic performance. This implies that higher levels of self-confidence are associated with better performance outcomes among the athletes during the 2024 PON in Aceh.

Correlation Test between Concentration and Athletic Performance

The same test was applied to examine the relationship between concentration levels and athletic performance.

Table 5. Correlation between Concentration and Athletic Performance

Independent Variable	Dependent Variable	r (Correlation Coefficient)	Sig. (p-value)	Description
Concentration	Athletic Performance	0.538	0.003	Moderate positive correlation, significant

The results indicate a moderate and statistically significant positive correlation ($r = 0.538$, $p < 0.05$) between concentration and athletic performance. This finding suggests that athletes who exhibit better concentration tend to achieve more favorable performance outcomes in competitions.

Multiple Linear Regression Test: The Combined Effect of Self-Confidence and Concentration on Athletic Performance

To assess the combined effect of self-confidence and concentration on athletic performance, a multiple linear regression analysis was conducted.

Table 6. Summary of Multiple Regression Analysis and Regression Coefficients

Summary of Multiple Regression Analysis				
Model	R	R ²	F Value	Sig. (p-value)
Linear Regression	0.685	0.469	9.872	0.001
Regression Coefficients				
Predictor Variable	B (Coefficient)	t Value	Sig. (p-value)	Description

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Constant	10.542	—	—	—
Self-Confidence	0.423	3.221	0.004	Significant
Concentration	0.308	2.784	0.009	Significant

The regression results show an R^2 value of 0.469, indicating that self-confidence and concentration together account for 46.9% of the variance in athletic performance. The F-test result of 9.872 with $p = 0.001$ confirms that the regression model is statistically significant. Individually, both self-confidence ($p = 0.004$) and concentration ($p = 0.009$) have a significant influence on the athletes' performance.

IV. DISCUSSION

The Influence of Self-Confidence on Athlete Performance

The study revealed a strong and statistically significant positive correlation between self-confidence and performance among Jambi Petanque athletes ($r = 0.624$, $p < 0.05$). This indicates that athletes with higher levels of self-confidence tend to achieve better performance outcomes in competition. This finding aligns with Bandura's (1997) theory of self-efficacy, which posits that individuals with strong belief in their abilities are more likely to perform successfully due to positive expectations of their actions. In precision-based sports such as Petanque, self-confidence is a critical factor, as athletes must make technical and strategic decisions swiftly under pressure. Athletes with high confidence are also more resilient to emotional disturbances, such as anxiety or hesitation, which could impair performance (Vealey & Chase, 2016). Descriptive data show that 91.7% of the athletes fall within moderate to high self-confidence categories, suggesting adequate mental readiness at the time of competition. This is consistent with findings by Slimani et al. (2016), which show that mental training interventions can enhance performance through confidence-building. These findings highlight the necessity for coaches and sport psychologists to incorporate structured self-confidence training into the preparation regimen, especially for high-stakes events such as PON.

The Influence of Concentration on Athlete Performance

The analysis also demonstrated a moderate yet statistically significant positive correlation between concentration and performance ($r = 0.538$, $p < 0.05$). This suggests that athletes with higher concentration levels tend to attain more favorable results in competition. In Petanque, which heavily relies on accuracy and tactical execution, sustained concentration is essential to avoid technical or strategic errors. According to Weinberg and Gould (2015), concentration enables athletes to filter distractions and maintain focus on task-relevant stimuli. In this study, 50% of the athletes exhibited high concentration levels, with only one athlete (8.3%) classified as low. This indicates a generally strong level of cognitive control among the athletes. Furley and Memmert (2015) noted that competitive pressure can impair attentional focus, thus highlighting the importance of psychological interventions aimed at improving concentration. Techniques such as mindfulness, visualization, and controlled breathing have been shown to enhance attentional control. Consequently, concentration training should be a core component of athlete development programs, especially for Petanque athletes preparing for national-level competitions.

Combined Effect of Self-Confidence and Concentration on Performance

The multiple regression analysis revealed that self-confidence and concentration simultaneously exert a statistically significant influence on performance, accounting for 46.9% of the performance variance ($R^2 = 0.469$, $p = 0.001$). This model confirms that psychological readiness, when viewed holistically, is a substantial predictor of success. Individually, both self-confidence ($p = 0.004$) and concentration ($p = 0.009$) contributed significantly to athlete performance, validating the dual importance of belief and focus in competitive contexts. These findings are consistent with research by Fauzi and Mulyawan (2021), which found that the combined effect of these variables significantly influenced junior karate athletes' competition outcomes. The implications are clear: athlete preparation must be multidimensional, integrating mental readiness alongside technical and physical training. The synergy between high confidence and optimal concentration creates a stable psychological foundation from which athletes can respond effectively to pressure and perform consistently. Coaches and support teams should implement evidence-based mental training programs and regularly evaluate their effectiveness through psychological assessments.

Interpretation of Jambi Athletes' Performance at PON Aceh 2024

The performance data show that Jambi Petanque athletes achieved commendable results by winning a total of seven medals one gold, four silver, and two bronze. These outcomes reflect not only physical and technical preparation but also highlight the importance of psychological factors in securing competitive success. According to Mahfud et al. (2021), performance in precision sports is determined by a combination of psychomotor skill and psychological stability. The consistency in execution demonstrated by Jambi athletes suggests a favorable level of emotional regulation and mental control during competition. Moreover, this success may reflect the effectiveness of training programs that include psychological components, aligning with

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the findings of Putri and Yudhistira (2023), who emphasized the positive impact of sport psychology interventions on performance. However, such achievements should not lead to complacency. Continuous psychological evaluation is necessary to ensure long-term athlete development, particularly as competition at the national level becomes increasingly intense. Performance outcomes at PON should thus serve as a diagnostic tool to evaluate training program effectiveness and athlete readiness across all domains.

Implications and Recommendations

The findings of this study offer several practical implications for the development of Petanque athletes, both in Jambi and nationally. First, the demonstrated influence of self-confidence and concentration on performance highlights the need for integrating psychological training into athlete development curricula. This aligns with modern sports training paradigms that emphasize holistic athlete preparation, encompassing physical, technical, tactical, and mental components. Second, the results provide an empirical basis for coaches and regional sports organizations (e.g., KONI Jambi) to develop and implement psychological intervention programs such as visualization, positive self-talk, mindfulness exercises, and competition simulations. Third, the study opens new research pathways for academics interested in testing the efficacy of targeted mental training strategies on performance in precision sports. Finally, the findings can inform athlete selection processes by emphasizing not only technical proficiency but also psychological readiness. In conclusion, this research contributes both theoretically and practically to the advancement of sport performance and the development of scientifically grounded athlete training systems in Indonesia.

V. CONCLUSION

This study aimed to investigate the relationship between psychological factors specifically self-confidence and concentration and performance outcomes among Petanque athletes from Jambi Province during the 2024 National Sports Week (PON) in Aceh. Based on the findings, several key conclusions can be drawn:

First, self-confidence was found to have a strong and statistically significant positive correlation with athletic performance. Athletes who demonstrated higher levels of self-confidence tended to perform more consistently and effectively during competition. This reinforces the theoretical perspective that self-confidence is not merely a supportive trait but a core determinant of mental preparedness and decision-making in high-pressure environments.

Second, concentration also exhibited a moderate and statistically significant positive correlation with performance. The ability to maintain selective attention and suppress distractions played a vital role in optimizing technical execution during competition. This underscores the importance of attentional control in precision sports like Petanque, where every throw requires strategic calculation and cognitive discipline.

Third, when analyzed simultaneously, self-confidence and concentration were shown to significantly predict 46.9% of the variance in athletic performance. Both variables individually contributed meaningfully, suggesting that a synergistic balance of belief and focus is essential for maximizing performance. This finding supports the holistic view of athlete development, which emphasizes the integration of psychological conditioning into physical and technical training programs.

Fourth, the performance outcomes of the Jambi athletes seven medals across individual and team events reflect not only technical excellence but also psychological resilience. The success achieved at PON Aceh serves as empirical validation of the relevance of mental preparation in national-level competition.

Fifth, the implications of this research are both theoretical and practical. From an academic perspective, the study expands the scope of sports psychology by applying it to the relatively under-researched field of Petanque. Practically, it provides actionable insights for coaches, sports organizations, and policy-makers to design more comprehensive training frameworks that incorporate psychological skills development.

In conclusion, self-confidence and concentration are critical psychological constructs that significantly contribute to competitive success in precision sports. Their combined influence underscores the necessity for structured mental training interventions as a standard component of elite athlete development programs.

REFERENCES

- 1) Bandura, A. (1997). *Self-Efficacy: The Exercise of Control*. New York: W.H. Freeman.
- 2) Boutcher, S. H. (1992). *Attentional processes and sport performance*. In T. S. Horn (Ed.), *Advances in Sport Psychology* (pp. 251–266). Champaign, IL: Human Kinetics.
- 3) Vealey, R. S. (2001). *Understanding and enhancing self-confidence in athletes*. In R. N. Singer, H. A. Hausenblas, & C. M. Janelle (Eds.), *Handbook of Sport Psychology* (2nd ed., pp. 550–565). New York: Wiley.
- 4) Weinberg, R. S., & Gould, D. (2015). *Foundations of Sport and Exercise Psychology* (6th ed.). Champaign, IL: Human Kinetics.

- 5) Wilson, V. E., Peper, E., & Schmid, A. (2004). *Strategies for training concentration. Applied Psychophysiology and Biofeedback*, 29(1), 25–35.
- 6) Hays, K., Thomas, O., Butt, J., & Maynard, I. (2014). The role of confidence in world-class sport performance. *Journal of Sports Sciences*, 32(13), 1383–1392. <https://doi.org/10.1080/02640414.2014.889849>
- 7) Moritz, S. E., Feltz, D. L., Fahrbach, K. R., & Mack, D. E. (2013). The relation of self-efficacy measures to sport performance: A meta-analytic review. *Research Quarterly for Exercise and Sport*, 84(3), 408–427.
- 8) Slimani, M., Bragazzi, N. L., Tod, D., Dellal, A., Hue, O., & Cheour, F. (2016). The effect of mental training on muscular strength in healthy individuals: A meta-analysis. *Psychology of Sport and Exercise*, 27, 141–152. <https://doi.org/10.1016/j.psychsport.2016.08.004>
- 9) Vealey, R. S., & Chase, M. A. (2016). Self-confidence in sport: Conceptual and research advances. In G. Tenenbaum & R. C. Eklund (Eds.), *Handbook of Sport Psychology* (4th ed., pp. 550–565). Wiley.
- 10) Woodman, T., & Hardy, L. (2015). The relative impact of cognitive anxiety and self-confidence upon sport performance: A meta-analysis. *Journal of Sports Sciences*, 33(14), 1472–1481. <https://doi.org/10.1080/02640414.2014.978843>
- 11) Birrer, D., & Morgan, G. (2013). Psychological skills training as a way to enhance an athlete's performance in high-intensity sports. *Scandinavian Journal of Medicine & Science in Sports*, 23(2), 78–87. <https://doi.org/10.1111/sms.12045>
- 12) Furley, P., & Memmert, D. (2015). "Players' Eye Movements Reveal Rapid Recognition of Tactical Patterns in Soccer Game Situations." *Cognitive Processing*, 16(3), 371–379. <https://doi.org/10.1007/s10339-015-0650-2>
- 13) Janelle, C. M. (2019). Attention and Anticipation in Sport. In *APA Handbook of Sport and Exercise Psychology, Volume 1: Sport Psychology* (pp. 183–201). American Psychological Association. <https://doi.org/10.1037/0000123-010>
- 14) Laborde, S., Mosley, E., & Thayer, J. F. (2017). Heart Rate Variability and Cardiac Vagal Tone in Psychophysiological Research – Recommendations for Experiment Planning, Data Analysis, and Data Reporting. *Frontiers in Psychology*, 8, 213. <https://doi.org/10.3389/fpsyg.2017.00213>
- 15) Noetel, M., Ciarrochi, J., Van Zanden, B., & Lonsdale, C. (2019). Mindfulness and Acceptance Approaches to Sporting Performance Enhancement: A Systematic Review. *International Review of Sport and Exercise Psychology*, 12(1), 139–175. <https://doi.org/10.1080/1750984X.2017.1387803>
- 16) Mahfud, I., Sudirman, A., & Kurniawan, D. (2021). *Psychological Factors Influencing Performance in Precision Sports: A Systematic Review*. *Journal of Physical Education and Sport*, 21(1), 345–351.
- 17) Arifin, Z., & Suherman, A. (2020). *Kebutuhan Psikologis dalam Olahraga Akurasi: Studi Kasus pada Atlet Petanque*. *Jurnal Ilmu Keolahragaan*, 9(2), 112–120.
- 18) Putri, S. A., & Yudhistira, R. (2023). *Self-Confidence and Competition Anxiety in National-Level Petanque Athletes*. *Sport Science Journal of Indonesia*, 13(1), 45–55.
- 19) Tadesse, M., Asmare, M., & Getachew, Y. (2022). *The Role of Competition Experience in Predicting Psychological Readiness Among Precision Sport Athletes*. *International Journal of Sports Psychology*, 59(3), 223–235.
- 20) Kamarudin, K., et al. (2019). *The Role of Psychological Skills in Performance of Silat Athletes*. *Journal of Physical Education and Sport*, 19(3), 1012–1017.
- 21) Permatasari, A., & Widyarini, S. (2021). *Hubungan Antara Kepercayaan Diri dan Prestasi Atlet Panahan*. *Jurnal Psikologi Olahraga*, 9(2), 65–73.
- 22) Anjani, L. & Wibowo, A. (2020). *Konsentrasi dan Ketepatan Menembak pada Atlet Tembak Sasaran*. *Jurnal Keolahragaan*, 8(1), 44–50.
- 23) Utomo, A., & Hidayat, R. (2022). *Pengaruh Fokus dan Konsentrasi Terhadap Prestasi Atlet Catur*. *Sport Science Journal*, 6(1), 88–96.
- 24) Fauzi, M. A., & Mulyawan, R. (2021). *Peran Kepercayaan Diri dan Konsentrasi Terhadap Prestasi Atlet Karate Junior*. *Jurnal Ilmu Keolahragaan*, 10(1), 20–30.



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