



Analysis of The Mental Level of Competition in North Sumatra Tennis Athletes at Pon XXI Aceh – North Sumatra 2024

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Abstract

This study aims to determine the mental level of North Sumatra tennis athletes competing in the XXI Aceh – North Sumatra 2024 PON and athletes participating in the PON selection, through the aspects of self-confidence, emotional regulation, concentration, and the influence of coaches during the competition. This study used a descriptive research method with a *purposive sampling* technique. The sample in this study consisted of 19 respondents. Data collection techniques used questionnaires via Google Forms and interviews. Data analysis was conducted by examining all data obtained from the respondents' questionnaire answers and interview results using a linker scale and converted into percentages. The results of the percentage analysis of the athletes' mental level of competition through each indicator show that the mental level of competition among North Sumatra tennis athletes at PON XXI Aceh – North Sumatra 2024 and Non-PON athletes showed a higher level of self-confidence, namely 80.75%, followed by concentration at 73.05%, and finally emotional regulation at 71.72%. This shows that North Sumatra tennis athletes at PON XXI Aceh – North Sumatra 2024 have problems controlling or managing their emotions, which is reinforced by the results of interviews conducted on the influence of coaches during matches, where athletes admit that when they are under pressure or in critical situations during matches, coaches who are able to read the game and provide the right solutions can help athletes overcome pressure and make better decisions. Understanding the mental aspect of competition will have a positive impact on the match.

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A. Introduction

Sports are physical activities that involve the muscles and energy in the body, which aim to encourage, improve, and maintain the physical and mental health of an individual or group of people who do them regularly and in accordance with their needs and abilities. Not only as a form of maintaining health, sports have various types such as recreational, fitness, health, education, and of course competitive sports, as stated by (Sandi, 2019).

In Indonesia, competitive sports are one of the most popular types of sports, along with fitness, health, and other types of sports. Competitive sports are sports that involve competition, where athletes strive to achieve the best results in a sports competition at the regional, national, or even international level. In competitive sports, there are many components involved, such as supporting facilities and infrastructure, athletes, and coaches, in order to achieve the highest level of achievement or performance, so there are structured training programs in place. In Indonesia, there are many types and varieties of sports that fall into the category of competitive sports that are currently being competed in, one of which is tennis. Tennis matches have long or fairly long playing times, so the mental condition of athletes during competition has a major influence. A strong mental condition is one in which an athlete can control and regulate themselves during competition or when facing their opponents. In tennis athletes, the mental components that are most influential are confidence, emotional regulation, and concentration.

An athlete's performance in a competition is not only about skill, but can also be influenced by other factors, one of which is psychological or often referred to as mental factors, as stated by Effendi (2016). If an athlete has good skills but their mental condition is not good, or even if they have already lost mentally before competing, then the athlete's good skills

will not be able to be maximized during the competition. For example, in sports where mental factors influence 80-90% of performance, such as tennis, figure skating, and golf, it is said that more than 50% of an athlete's success is influenced by mental factors, as stated by coaches (Weinberg and Gould, 2011). Therefore, to achieve good performance, an athlete needs a balance between good physical condition, good skills, and strong mental condition during competition.

This is supported by the results of the researcher's direct experience and observation of North Sumatra tennis athletes competing in the 2024 Aceh-North Sumatra National Games. From these achievements, it can be seen that the mental condition, especially the competitive mental condition of each athlete, has a significant influence on the performance of the North Sumatra tennis athletes.

If an athlete's mental condition is disrupted, especially in terms of self-confidence, emotional regulation, and concentration (), it will greatly affect the athlete's performance. Good mental conditions, where tennis athletes have high self-confidence, can regulate their emotions well, and have a good level of concentration, will have a positive impact on the athletes' performance. This was proven when the 2024 Aceh-North Sumatra PON XXI competition was held at the Syah Kuala University Tennis Sport Center in Banda Aceh, where North Sumatra tennis athletes competed.

Based on the researcher's experience and direct observations described above, the researcher feels that there are problems with the mental state of competition, particularly in terms of self-confidence, emotional regulation, and concentration, as well as external factors such as the influence of coaches during competitions experienced by North Sumatra tennis athletes. Therefore, based on the above, the researcher was interested in conducting an observation through an analysis of the

mental level experienced by North Sumatra tennis athletes during the PON XXI Aceh - North Sumatra 2024 competition.

The subjects of this study were North Sumatra tennis athletes who represented North Sumatra in the 2024 Aceh-North Sumatra PON, totaling 8 people, and athletes who participated in the PON selection and were active as tennis athletes registered in tennis events throughout Indonesia, totaling 11 people, namely 12 male athletes and 7 female athletes. Reflecting on the athletes' performance results, this serves as additional support for researchers in exploring information about the problems experienced by athletes, especially in terms of their mental state during competition.

Based on this background and these issues, the researchers wanted to study further the issues that arise and analyze the experiences of athletes, namely the level of athletes' mental competitiveness through the aspects of self-confidence, emotional regulation, and concentration, as well as the influence of coaches during competitions on North Sumatra tennis athletes. The term "Analysis of the Mental Competitiveness Level of North Sumatra Tennis Athletes at the 2024 Aceh-North Sumatra PON XXI" was chosen by the researchers.

In accordance with the problem formulation described above, the objectives of this study are to:

1. To determine the level of mental competitiveness in terms of self-confidence among North Sumatra tennis athletes at the 2024 Aceh-North Sumatra PON XXI.
2. To determine the level of mental competitiveness in terms of emotional regulation among North Sumatra tennis athletes at the 2024 Aceh-North Sumatra PON XXI.
3. To determine the level of mental competition in terms of concentration among North Sumatra tennis athletes at the 2024 Aceh-North Sumatra PON XXI.

4. To determine how influential coaches are for individual North Sumatra tennis athletes at the 2024 Aceh-North Sumatra PON when competing.

The results of this study are expected to become a source of knowledge development in the world of sports, both for tennis and other sports. In particular, this study is expected to contribute to the preparation of athletes during the training process so that they can achieve their best performance.

The results of this study are expected to serve as a reference and input for coaches, both in tennis and other sports, to understand the mental state of athletes in the process of developing their competitive mindset. Additionally, these findings are expected to be developed into further scientific research discussing the influence of psychological aspects as a crucial supporting factor in achieving excellence for athletes, both in tennis and other sports.

Mentality is an important component that cannot be separated from athletes, where mentality for an athlete is the key to success in achieving achievements in a competition. An athlete whose mental state has already been defeated before competing will not be able to exert all the abilities they have trained for. Each individual athlete certainly has different levels and abilities in terms of mental competition. In this case, the role of the coach in understanding the psychological aspects of an athlete is very much needed. The coach's ability to see and assess the psychological aspects of each athlete will greatly support the success of an athlete in achieving their best performance.

The role of sports psychology, particularly in the aspect of mental competition, greatly supports an athlete's success. This study will examine North Sumatra tennis athletes who participated in the 2024 Aceh-North Sumatra PON XXI. Specifically, it will analyze the level of mental preparedness of North Sumatra tennis athletes in terms of self-confidence, emotional regulation, concentration, and

the influence of coaches during competitions.

Based on direct observations and the researcher's experience regarding the level of mental preparedness among North Sumatra tennis athletes participating in the 2024 Aceh-North Sumatra PON, it is possible to identify the problems experienced by athletes, particularly in terms of mental preparedness, namely in the aspects of self-confidence, emotional regulation, concentration, and the influence of coaches during competitions. Thus, this study was conducted to determine the level of mental competition in North Sumatra tennis athletes who participated in PON XXI Aceh - North Sumatra 2024 through the aspects of self-confidence, emotional regulation, concentration, and the influence of coaches during the competition.

The conclusion that can be drawn from the framework outlined above is an analysis of the mental level of North Sumatra tennis athletes participating in PON XXI Aceh - North Sumatra 2024 in terms of self-confidence, emotional regulation, concentration, and the influence of coaches during the competition.

B. Methods

In the context of this study, the population referred to is all tennis athletes from North Sumatra who participated or did not participate in the 2024 Aceh-North Sumatra PON, with a total of 19 people.

A sample can be defined as a portion of the population in terms of number and characteristics, according to Sugiyono (2025:81). In this study, sampling was conducted using purposive sampling. Sugiyono (2015:85) explains that purposive sampling is a technique of selecting samples based on certain aspects. The criteria used to determine the sample in this study were: 1) Tennis athletes from North Sumatra who participated in the 2024 Aceh-North Sumatra PON XXI, 2) Athletes who participated in the 2024 Aceh-North

Sumatra PON XXI selection, and 3) Athletes who were willing to be part of the sample. Based on these criteria, there were 19 people who met the requirements.

In this study, the instruments used consisted of questionnaires and interviews. The questionnaires used were closed-ended, in which the researchers had prepared specific questions or statements that respondents were expected to answer. Respondents were asked to check (√) the options that they felt best described their characteristics, as described by Arikunto (2019). The questions and statements were divided into two categories: positive and negative. This was done so that respondents would read carefully and ensure that each question was randomized, so that each respondent would receive a fair assessment. The answer options provided include: Strongly Agree (SS), Agree (S), Disagree (KS), and Strongly Disagree (TS).

The developed questionnaire will be tested beforehand before the actual data collection process is carried out. The purpose of this test is to ensure that the instrument used is truly valid and reliable. The instrument test is conducted on a sample with characteristics similar to the actual sample conditions.

1) Validity

An instrument that is considered valid or effective has a high level of validity. Conversely, an instrument with low validity indicates that the instrument is less reliable.

An instrument can be said to be valid if it is able to provide accurate data on the variables being studied and does not deviate from its constituent elements and functions. In this study, the product moment correlation method was used to evaluate item validity. This process was carried out by correlating the items with the total score. The validity level of the items is determined by comparing the calculated *r* value and the table *r* value of the product moment.

Arikunto (2016).

The results of the calculation will then

be compared with the r table value at a significance level of 5%. If the calculated r value is greater than the r table, the instrument is considered valid. Conversely, if the calculated r value is smaller than the r table, the instrument is declared invalid.

2) Reliability

If an instrument shows consistency or consistent conditions, it can be considered reliable. In other words, the results obtained will be relatively the same or consistent when the instrument is considered reliable. In other words, the results obtained will be relatively the same or consistent when the instrument is applied to the same object at different times. In this study, the instrument used was a questionnaire, so its reliability was measured using the alpha formula, as stated by Arikunto (2016).

The next stage is to conduct semi-structured interviews with each individual to explore the results obtained. According to Creswell (2014), semi-structured interviews offer a balance between sufficient structure to maintain the focus of the research and the flexibility needed to explore more in-depth and specific information.

In this study, the data collected is quantitative, which will then be converted into qualitative data. Thus, each result obtained will be described according to the mental level of each North Sumatra Tennis athlete at the 2024 Aceh-North Sumatra PON XXI.

C. Result and Discussion Result

Tabel 1. Questionnaire Validation Sheet

No	Aspects assessed	Assessment Scale			
		1	2	3	4
1	Statement Material				
	1. Material presented systematically				√
	2. Appropriate language used				√
	3. Language is easy to understand				√
2	Content of the Statement				
	1. Material is in line with the content of the assessment indicators				√
	2. The scope of the material is in line with the domain to be measured				√
	3. The material is clear and specific			√	

Source: Data Processing Results (2025)

Based on the validator's assessment, the instrument is deemed suitable for use with revisions as suggested, namely corrections to the items that have been corrected in the questionnaire.

1. Validity Test and Reliability Test

Table 2 Validity and Reliability Tests of the Research Instrument

Statement	r_{xy}	r_{tabel}	Description	Cronbach's Alpha	Number of Items
1	0.535	0.455	Valid		
2	0.543	0.4555	Valid		
3	0.636	0.4555	Valid		
4	0.462	0.4555	Valid		
5	0.806	0.4555	Valid		
6	0.927	0.4555	Valid		
7	0.551	0.4555	Valid		
8	0.452	0.4555	Valid		
9	0.584	0.4555	Valid		
10	0.482	0.4555	Valid		
11	0.864	0.4555	Valid		
12	0.587	0.4555	Valid		
13	0.712	0.4555	Valid		

Statement	r_{xy}	r_{tabel}	Description	Cronbach's Alpha	Number of Items
14	0.411	0.4555	Valid	.673	37
15	0.588	0.4555	Valid		
16	0.674	0.4555	Valid		
17	0.704	0.4555	Valid		
18	0.490	0.4555	Valid		
19	0.664	0.4555	Valid		
20	0.677	0.4555	Valid		
21	0.723	0.4555	Valid		
22	0.590	0.4555	Valid		
23	0.730	0.4555	Valid		
24	0.401	0.4555	Valid		
25	0.849	0.4555	Valid		
26	0.587	0.4555	Valid		
27	0.630	0.4555	Valid		
28	0.749	0.4555	Valid		
29	0.471	0.4555	Valid		
30	0.596	0.4555	Valid		
31	0.865	0.4555	Valid		
32	0.463	0.4555	Valid		
33	0.976	0.4555	Valid		
34	0.709	0.4555	Valid		
35	0.765	0.4555	Valid		
36	0.984	0.4555	Valid		
37	0.762	0.4555	Valid		

4.1.4 Analysis of Mental Competition Levels in North Sumatra Tennis Athletes at the 2024 Aceh-North Sumatra PON XXI

Table 3 Descriptive Analysis
Descriptive Statistics

	N	Min	Maximum	Mean	Standard Deviation
Mental Competition Level Survey Scores Of Sumut Tennis Athletes	19	103.00	119.00	111.2105	4.86003
Valid N (listwise)	19				

Analisis Tingkat Mental Bertanding

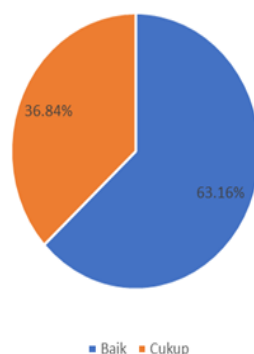


Figure 1 Overview of the Mental Competition Level of North Sumatra Tennis Athletes at the 2024 Aceh-North Sumatra PON XXI

4. Summary of Mental Competition Levels Based on Indicators

Table 4 Summary of Mental Competition Levels

No	Indicator	Mental Level	Summary
	Self-Confidence Aspect	80.75	43.24
2	Emotional Regulation Aspects	71.72	32.43
3	Concentration Aspects	73.05	24.33
	Average	75.17% (Good)	

Source: Processed primary data 2025

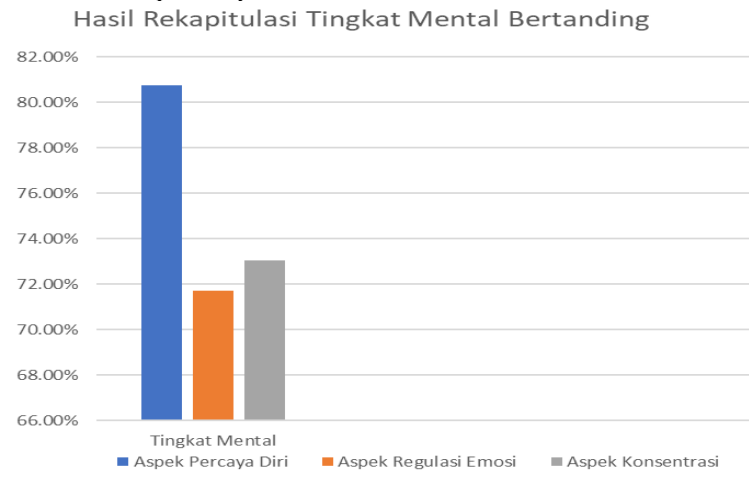


Figure 2 Summary of Analysis of the Mental Competitiveness Level of North Sumatra Tennis Athletes

Based on the results of research and data analysis regarding the mental level of North Sumatra tennis athletes at PON XXI Aceh - North Sumatra 2024, which was conducted through questionnaires using Google Forms and interviews with 19 respondents, the results can be seen in the answers to the research questions. The research proved that: (1) 12 people had a good mental level, (2) 7 people had an adequate mental level, (3) Overall, the athletes' mental level scored an average of 75.17%, which is in the good category. The assessment of the athletes' competitive mental level was based on the results of the conversion value calculation as stated by Sudijono (2007), which states that a) 0-45 (very poor), b) 46-65 (poor), c) 66-75 (adequate), d) 76-90 (good), and e) 91-100 (very good).

In addition to these three aspects, the interview results show that the influence of the coach during the competition also affects the athlete's mental condition. The interview results show that coaches play a very large role in shaping the mental condition of athletes. Emotional support, tactical guidance, and the right attitude in facing competition situations can have a positive impact on an athlete's

performance. Conversely, a lack of support or excessive pressure from coaches can disrupt athletes' focus and confidence. Therefore, coaches who are able to manage their emotions, provide motivation, and build good relationships with athletes will be more effective in helping athletes achieve their best performance on the field.

Based on the analysis of the percentage of athletes' competitive mentality through each indicator, it shows that the level of competitive mentality among North Sumatra Tennis athletes at the XXI Aceh PON – North Sumatra 2024 is higher in the aspect of self-confidence at 80.75%, followed by the aspect of concentration at 73.05%, and finally the aspect of emotional regulation at 71.72%. This proves that North Sumatra tennis athletes have a good level of mental preparedness and exhibit varying levels based on the three aspects of mental preparedness analysis for North Sumatra tennis athletes at the 2024 Aceh- XXI PON.

This is further reinforced by the results of interviews conducted on the influence of coaches during matches. Athletes revealed that in stressful or critical situations, coaches who

are able to analyze the game accurately and provide effective solutions can help them overcome pressure and make better decisions. Words of encouragement, expressions of support, and a positive attitude from coaches can provide significant mental encouragement. Several athletes revealed that when they felt pressured or lacked confidence, the presence of a motivating coach was able to restore their enthusiasm and focus. This shows that the above data is correct, where North Sumatra Tennis athletes at PON XXI Aceh - North Sumatra 2024 still have a lower level of mental competition in terms of emotional regulation compared to confidence and concentration, so they still need the influence of coaches during matches to manage their emotions and control themselves.

In this study, the mental competition level data for North Sumatra tennis athletes at the 2024 Aceh-North Sumatra PON is still in the good category and even in the sufficient category, which means that there is still work to be done to improve the athletes' mental competition level to a very good category above the abilities of ordinary people or non-athletes. This is in line with a study published in *Personality and Individual Differences*, which found that athletes show higher mental toughness scores than non-athletes. This shows that higher mental toughness is a characteristic that distinguishes athletes from ordinary individuals (Felix Guillen 2014). A systematic review by Cowden (2017) shows that around 88% of relevant studies found that athletes with higher levels of mental toughness tend to achieve more and perform better. This confirms that high mental toughness is an important psychological attribute underlying the success of athletes, with evidence from research conducted by researchers stating that mental toughness greatly influences performance in competitions.

D. Conclusion

The conclusion of this study shows that North Sumatra tennis athletes participating in the 2024 Aceh-North Sumatra PON XXI have a good level of mental toughness and are even in the

adequate category, which means that there is still work to be done to improve the athletes' mental toughness to a level that is very good, above the abilities of ordinary people or non-athletes. This is evidenced by 19 respondents who obtained data on their competitive mentality with an average score of 75.17%, with the following details: In terms of self-confidence, the athletes' competitive mentality scored 80.75%. In terms of emotional regulation, the athletes' competitive mentality scored 71.72%. In the concentration aspect, the athletes' mental competition level obtained a percentage of 73.05%.

Based on the results of the study on the mental level of North Sumatra tennis athletes at PON XXI Aceh - North Sumatra 2024, the researchers have compiled a number of suggestions based on the findings and conclusions obtained, as follows.

1 regulation training is very necessary for coaches to conduct with North Sumatra tennis athletes, such as training in stressful situations and conditions so that athletes become accustomed to such situations and can still control themselves.

Coaches must possess psychological knowledge to understand the characteristics of the athletes they train so that when giving instructions, motivation, and information to athletes, especially during competitions, it is in line with the athletes' characteristics.

Improving mental quality, especially in terms of emotional regulation, is very important for North Sumatra tennis athletes because this aspect greatly affects the quality of athletes in competition.

Improving mental quality requires every North Sumatra tennis athlete to understand their weaknesses and work on improving them.

E. Conflict of Interest

no conflict of interest

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