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Analysis of the Relationship between Anxiety Level and Smash Accuracy of Badminton Athletes

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Abstract: This study aims to analyse the relationship between anxiety level and smash accuracy in badminton athletes. Anxiety is one of the psychological factors that can affect athlete performance, especially in sports that require concentration and accuracy such as badminton. This study uses a quantitative approach with a correlational design. Data were collected through anxiety questionnaire and smash accuracy measurement through validated skill test. The results of the analysis show that there is a significant relationship between anxiety levels and athletes' smash accuracy. The higher the level of anxiety experienced by athletes, the lower the smash accuracy displayed, and vice versa. This finding indicates the importance of managing psychological aspects in athlete training to improve technical performance on the field.

Keywords: anxiety, smash accuracy, badminton, athlete performance

1 Introduction

Badminton is a major sport in Indonesia. Many players from each group have the highest ranked in the world. Badminton is one of Indonesia's representative sports, but the results are getting worse. This requires serious attention from internal badminton coaches to immediately find solutions to the problems that cause bad badminton performance. Some types of athletes are more prone to experience the impact of anxiety when performing the game. Amateur athletes are more prone to anxiety than professional athletes. This is due to their lack of experience in competing and managing emotions. Furthermore, sources of pre-competition anxiety include fear of failure, thinking too much about what people will say about their game, and lack of confidence. Pre-competition anxiety is also influenced by factors such as skill level, experience, and level of arousal in daily activities (Jatmika & Linda, 2017).

In the sport of badminton, psychological factors are very important, because can help indicate the movement and direction of an athlete's performance. Psychological factors are often expressed in the form of emotions, tactics, motivation, tension, determination, fear, and so on. Psychological factors are also the structure and function of psychological aspects, namely the emotional factors that an athlete has in relation to personality traits such as emotions, attitudes and the athlete's personal feelings towards himself, his coach and the people around him. Emotions are known as feelings of pleasure, sadness, anger, fear, anxiety and stress. Anxious players may not achieve maximum results when playing a match as it may cause undue mental stress during the match and affect their performance during the match. Therefore, it is very important for an athlete to prepare themselves well to be able to overcome disorders such as anxiety that can affect performance in games and competitions (Hasibuan, 2018).

Everyone has anxiety, but not everyone has a good level of anxiety. This self-anxiety can be trained/strengthened based on what we need to improve our self-esteem. Athletes who master the basic skills of badminton automatically learn basic skills such as smash. A player who has mastered basic skills must not make fatal mistakes such as dropping the ball to hit the opponent, hitting the net or the ball not touching the opponent's penalty area. Athlete performance is the result of speed, strength, flexibility, coordination and skill. So when an athlete's mind is dominated by distracting thoughts such as excessive negative emotions, concentration becomes hindered, it will not be perfect for the game. Athletes usually experience symptoms of anxiety and stress during a match, such as anxiety, tension, confusion, lack or loss of concentration, and loss of confidence in competition. One factor that often causes a match to fail is the athlete's lack of mental development.

The most feared thing in competing is the fear of making mistakes and not being able to win the match. The coach also said that he also saw such symptoms in his athletes. A few days before competing many athletes complained that they were not ready for competition or felt anxious for the match. Based on the description above, it is clear that anxiety in facing the match is an important factor to be of more concern in coaching athletes, especially badminton athletes. For an athlete, a match or sports competition is a situation that arouses competitive tendencies, but on the other hand also arouses self-confidence to avoid failure which is reflected through anxiety of a match or competition.

Factors that cause fear when participating in a match, especially fear and failure, such as threats to oneself, occur when they are afraid of being defeated by an opponent who is considered weak. Secondly, there is the risk of physical injury. This occurs when the fear of an attack from someone who may cause physical injury becomes a serious threat to the athlete. Thirdly, there is the fear of social judgement that results from the fear of being viewed

negatively by the general public and threatens the athlete's self-esteem. Fourth, in terms of competition where fear arises when the player does not know when to start the match. Fifth, Confusion with routine training. In this case, anxiety arises when athletes are asked to change techniques and methods without competition practice.

The coach must pay attention to the level of anxiety of competing athletes, because if the athlete is filled with high anxiety, it will cause the athlete to have difficulty in controlling his movements, and adversely affect his performance (performance). Based on the background description above, this research takes the title 'Analysis of the Relationship between Anxiety Level and Smash Accuracy of Badminton Athletes'.

2 Method

In This study was using experimental method. The data were collected through anxiety questionnaire and smash accuracy measurement through validated skill test. Involving 25 respondents who were badminton athletes assisted by Makassar City. After that, the measurement results was analysis using SPSS 10 program to know the relationship between Anxiety Level and Smash Accuracy of Badminton Athletes.

3 Result

In this chapter will be explained about the results of data analysis to express the findings or results of research, namely to find out how the Relationship between Anxiety Level and Smash Accuracy of Badminton Athletes PB, to answer problems and to achieve goals and to test the hypothesis of this study, then all the data is processed using SPSS statistical tests.

1. Descriptive Analysis

Descriptive data analysis is intended to get an overview of the research data that has been collected previously. Data description is intended to be able to interpret and give meaning to the data. The data collected in this study were the age of the respondents, the anxiety test score and the badminton smash accuracy test score involving 25 respondents who were badminton athletes assisted by Makassar City.

Table 1. Age Description of Badminton Athletes

Variabel	N	Mean	Standard Deviation
age	25	21,40	3,52

From this table, can be seen that of the 25 respondents who are badminton athletes, the average age of badminton athletes. Garuda when this test was carried out was 21.40 years, with an age range of 3.52 years.

Table 2. Description of Anxiety and Accuracy of Smash Badminton Athletes

Variabel	N	Rata-rata	Min.	Max.	Standar Deviasi
Anxiety level	25	63,08	43	82	11,33
Accuracy of Smash	25	58,04	23	84	17,25

From table 4.2 above shows the measurement results obtained through a questionnaire or questionnaire of anxiety level and smash accuracy test on 25 respondents who are badminton athletes, the average score of respondents on the anxiety level test is 63.08 points with a minimum value of 43 points and a maximum value of 82 points, with a value distance or standard deviation of 11.33 points, this value indicates that the higher the score on the anxiety questionnaire, the lower the level of anxiety experienced by the athlete, while the score obtained from the smash anxiety level test the average respondent scores 58.04 points, the lowest score or minimum value obtained by the respondent is 23 points and the maximum value obtained by the respondent is 84 points, with a value distance of 17.25 points.

2. Data Normality Test

One of the assumptions that must be met so that parametric statistics can be used is that the data follows a normal distribution. If the test turns out that the data is normally distributed, it means that parametric statistical analysis has been fulfilled. To find out that the group data is normally distributed, from the title Relationship between Anxiety Level and Smash Accuracy of Badminton Athletes, then testing is done using the Shapiro-Wilk Test. The results of the data normality test can be seen in the following table:

Table 3. Summary of Normality Test Results of Anxiety Level Data with Smash Accuracy of Badminton Athletes

Variabel	Kolmogrov-Smirnov	Sig.	Shapiro-Wilk	Sig.	Ket.
Anxiety level	0,078	0,200*	0,970	0,640	Normal
Accuracy of Smash	0,155	0,123	0,930	0,085	Normal

4 Table 4.3 above shows the results of the data normality test with an analytical approach by reading the Shapiro-Wilk test (because the number of respondents <50) by comparing the sig value. said to be normal if sig> 0.05, it is concluded as follows:

- a. The anxiety level obtained by the Shapiro-Wilk test has a sig value of 0.640 ($P > 0.05$), so it can be stated that the self-confidence level data follows a normal distribution or is normally distributed.
- b. The smash accuracy with the Shapiro-Wilk test obtained a sig value of 0.085 ($P < 0.05$), so it can be stated that the smash accuracy data follows a normal distribution or is normally distributed.

3. Hypothesis Testing Results with Correlation Test

The hypothesis carried out in this study needs to be tested and proven through empirical data obtained in the field through tests and measurements of the variables studied with the research variables to determine the data of the two normally distributed groups, from the research title Relationship between Anxiety Level and Smash Accuracy of Badminton Athletes. Furthermore, the data will be processed statistically. Testing the hypothesis of this study used is the Pearson correlation test.

Table 4. Relationship between Anxiety Level and Smash Accuracy of Badminton Athletes

Correlation of Variables	Smash Accuracy
Anxiety Level	r : 0,409
	p : 0,043
	n : 25

10 From table 4.4 above shows that the p value: 0.043 (p value <0.05) means that H_0 is rejected, so the conclusion is that there is a relationship between anxiety level and smash accuracy in 25 respondents who are badminton athletes.

4 Discussion

6 This study aims to see the relationship between anxiety level and smash accuracy of badminton athletes. This study involved 25 respondents who were badminton athletes with an average age of 21 years. The variable data collected in this study is the anxiety level score measured using a questionnaire instrument or a standard questionnaire of 23 items consisting of 20 negative items and 3 positive items, while the smash accuracy score is measured by the smash accuracy test, where each respondent has the opportunity to hit 20 smash shots, 10 times to the right and 10 times to the left targeting the predetermined point area, the overall score is accumulated.

Smash is a blow that is carried out by the athlete strongly and must be done in the correct position so that the opponent is difficult to return the shuttlecock. In doing smash, athletes must pay attention to accuracy in order to be able to do smash well. In badminton, high concentration is needed in athletes both during training and in matches. Concentration has a

very important role, if the athlete loses concentration, it can cause a decrease in accuracy in the shot so that the fall of the shuttlecock is not right on target.

In this study, the results of analyses that can prove the relationship between anxiety levels and smash accuracy of badminton athletes from 23 items illustrate that the higher the answer score given, the lower the respondent's anxiety level. The lower the athlete's anxiety level, the better the smash accuracy performed by the athlete. Based on the analysis of researchers obtained from direct non-formal observations and interviews, athletes, in addition to the intensity of routine training 3 times a week, on average have been pursuing badminton for quite a long time, and actively participate in various competition events so that the experience and abilities they have make them quite capable of controlling their anxiety both from their own internal factors and triggered by external factors.

Anxiety is an internal factor that is often triggered by various external factors including fear of being judged negatively by the audience, or just screaming from the audience, the appearance of a very confident opponent and so on, while internal factors are often triggered by the athlete's lack of experience competing so that they lack confidence or the athlete's personality is easily anxious.

Anxiety can be a positive thing if an athlete who has anxiety when going to compete makes him more motivated to perform optimally but if the anxiety continues to increase it will cause his performance to be bad. Therefore, athletes need to know simple efforts that can be made in order to reduce their anxiety when competing (Muharram et al., 2022).

Regarding the relationship between anxiety and an athlete's performance, Cheng et al. classify it into three domain aspects, namely cognitive, physiological and regulatory. First, the cognitive aspect is the focus of the athlete's thoughts on negative judgements and shortcomings; second, the physiological aspect is the response caused by the nervous system that causes somatic tension so that anxiety symptoms appear; third, the regulatory aspect is the athlete's level of perception regarding his ability to control and achieve good performance in stressful situations (Cheng & Hardy, 2016).

From the results of these studies it is concluded that in every practice and match athletes must avoid and avoid internal and external factors that can interfere with their psychological condition which will affect their game performance on the field. Although anxiety is a natural thing felt by everyone including athletes who face the match, athletes will feel anxious, worried, heart rate will be faster, sometimes even the urge to urinate appears. However, it will have a negative impact because if anxiety appears excessive, an athlete who is feeling anxiety will have reduced concentration and confidence, muscle responses will slow down, accuracy in reading the opponent's game pattern will also decrease, and athletes will easily experience fatigue and can even increase the risk of injury in playing, so it will greatly affect the athlete's performance.

In some psychological research explains that to reduce anxiety, athletes can do relaxation techniques both respiratory relaxation and muscle relaxation because if the muscles relax, the athlete's body will be ready to receive stimuli from outside (Siregar et al., 2022). In addition to relaxation, supportive counselling (cognitive behaviour therapy technique counselling) and emotional stabilisation techniques can also be done (Effendi, 2017).

5 Conclusion

The conclusion of this study is there is a relationship between anxiety level and smash accuracy of badminton athletes.

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