

Exploration of Factor Analysis Through an Inventory of Psychological Skills for West Sumatra Pencak Silat Athletes

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Abstract

Background and aim. Muay Thai is a martial art that has developed rapidly and gained popularity across various age groups. However, its development in certain regions, including Indragiri Hulu Regency, still faces several challenges related to management, facilities, and athlete participation. Therefore, this study aimed to analyze and describe the development of Muay Thai martial arts in Indragiri Hulu Regency.

Methods. This study employed a descriptive qualitative approach. The research was conducted from February 28 to March 28, 2023, at the Inhu Fighting Academy camp. Data were collected through observation, interviews, and documentation involving key informants, including administrators, coaches, and athletes.

Results. The findings indicate that the development of Muay Thai in Indragiri Hulu has progressed but remains suboptimal. Facilities and infrastructure are relatively adequate in terms of equipment, but training venues are still limited. Activity programs have not been implemented optimally, affecting the sport's promotion. Athlete interest and discipline in attending training sessions are also relatively low. In addition, athlete recruitment has not been maximized, as it depends on limited events and school-based initiatives.

Conclusions. The development of Muay Thai in Indragiri Hulu is influenced by several factors, including inadequate facilities, limited program implementation, low athlete discipline, and suboptimal promotion. Strengthening organizational management, improving facilities, expanding activity programs, and enhancing athlete discipline are necessary to support sustainable development and improve athletic performance.

Keywords: *Martial Arts; Muay Thai; Planning; Development.*

1. Introduction

The government issued Law 11 of 2022 concerning sports in article 1 paragraph 122 stating; "Achievement sports are sports that develop and nurture athletes in a systematic, integrated, sustainable manner with competition to achieve achievements supported by technology and sports science."

Pencak silat is one of the martial arts sports that fosters the mental soul and prioritizes courage, discipline, vigilance, sportsmanship, and emotional control. The development of pencak silat has now become an achievement sport with a very high level of competition (Bahtra et al., 2024). To improve sports achievements, athletes practice discipline according to a schedule program that has been designed to support quality and quantity in training (Billa et al., 2023).

Internal factors and external factors also affect achievement which can be seen from 4 components, namely, physical, technical, tactical and mental (Dimiyati, 2023). All components have an important role in improving achievements, one of which is psychological or mental strength (Dimiyati et al., 2020). A pencak silat athlete needs good mental conditions such as confidence, concentration, and self-efficacy (Fajri et al., 2022).

The psychological aspect must be developed and practiced well because in the match the psychological aspect affects the other 80% and 20% (Ilham & Dimiyati, 2021). Many sports experts believe that peak performance depends on an athlete's mental toughness overcoming obstacles in the game. In the sport of pencak silat there is often a gap between physical and mental training, many coaches and athletes ignore the psychological

aspect of athletes, although many studies show that psychological aspects can affect athletes' performance and in fact psychological factors are still limited to be considered as determinants in pencak silat achievements.

This can be seen from West Sumatra pencak silat athletes where the coaching of West Sumatra athletes is carried out at the Student Sports Education and Training Center (PPLP). Based on the results of observations and interviews with PPLP West Sumatra silat coaches, the researcher found the existing problems. One of them is the psychological skills of athletes. The lack of knowledge of coaches about athletes' psychological skills because coaches only focus on physical training, techniques, tactics and psychologically the coach only looks at observations, therefore it is not known how the psychological skills of West Sumatra pencak silat athletes are.

The (Kamnuron et al., 2020) explained that in psychological skills there are aspects in it, namely, motivation, confidence, anxiety control, mental preparation, team attention and concentration that affect the success of athletes when exercising. From these various aspects, there are factors that affect it as follows.

Motivation is an impulse that comes from within or outside an individual to do an activity, while factors that affect it are both intentional such as motivation from oneself, for self-satisfaction and there are also external factors such as the urge to be proud of both parents, or get bonuses (Liloi et al., 2023).

Self-confidence is an individual's belief in his or her ability to succeed in a particular task (Nelson & Haris, 2021). The factors that affect it are the

mastery and development of abilities in individuals to show the ability to get optimal achievements.

Anxiety is a negative emotional condition that arises with the presence of worry and fear that comes from mental tension (Solihin et al., 2022). Anxiety Control is the ability to manage and regulate anxiety levels to stay focused and calm and still perform optimally even under stress. The factors that affect it, such as anxiety, often arise from an individual's perception of the situation as a threat rather than a challenge. Athletes who are able to assess situations objectively and see them as challenges that can be overcome tend to be better at managing anxiety.

Mental preparation requires mental training for the athlete. Mental training is a training program that is systematically designed so that athletes can master and also apply psychological skills that are useful for success (Kamnuron et al., 2020). One of the factors that can affect the development of mental strength is the interaction between athletes and coaches.

The importance of the team is an action taken by athletes which prioritizes the process of unity and togetherness so that the team can work well and effectively (Sumarna et al., 2018). One of the factors that affects it is mutual respect and increasing a sense of tolerance, both between fellow athletes and between athletes and coaches.

Concentration is the ability to focus on relevant environmental cues (Sutoro et al., 2020) stated that there are two factors that affect concentration, namely factors from within the sportsperson (internal) and factors from outside the sportsperson (external).

2. Materials and Method

This study uses quantitative descriptive techniques with survey methods using ex post facto design. This study examines the exploration of the psychological skills of West Sumatra pencak silat athletes consisting of aspects of motivation, self-determination, anxiety control, mental preparation and team attention using The Psychological Skills Inventory For Sports (PSIS-R5) instrument. This research was conducted at the Sports Equipment UPTD and distributed questionnaires through google forms.

The population in this study is 300 West Sumatra pencak silat athletes. This sampling

technique uses a purposive sampling technique with the criteria of athletes who have participated in the national championship. So that the sample in this study is 30 athletes.

The study used a statistical descriptive analysis method with SPSS version 25.0 and Microsoft Excel using the calculation of mean, median, mode, standard deviation, and categorization values at very high, high, medium, low, and very low levels. The data is then presented in the form of a bar type graph or also called a Histogram.

3. Results and Discussion

Results

This study aims to find out how the psychological skills of West Sumatra pencak silat athletes are. This study collected data through a google form questionnaire given to 30 athletes consisting of 15 men and 15 women. Using The Psychological Skills Inventory for Sports (PSIS) instrument consists of (1) motivation (8 items); (2) trust (8 items); (3) emergency handling (8 items); (4) mental preparation (7 items); (5) the importance

of the team (7 items); and (6) concentration (7 items). The results of the statistical descriptive analysis of the psychological skills of West Sumatra pencak silat athletes are as follows:

Psychological Skills of West Sumatra Pencak Silat Athletes

The results of data processing from 30 West Sumatra pencak silat athletes with the PSIS-R5 Questionnaire were obtained as follows:

Table 1. Results of Descriptive Analysis of Psychological Skills of West Sumatra Pencak Silat Athletes

Statistics		Motivation	Confidence	Anxiety Control	Mental Preparation	Team Attention	Concentration
N	Valid	30	30	30	30	30	30
	Missing	0	0	0	0	0	0
Mean		30,8333	25,7000	19,8333	24,8333	20,1333	20,4667
Median		31,0000	25,0000	19,5000	26,0000	20,0000	21,0000
Mode		32,00	25,00	15,00a	26,00	17,00a	18,00a
Std. Deviation		1,59921	2,81805	5,97168	5,07926	3,80320	3,67408
Variance		2,557	7,941	35,661	25,799	14,464	13,499
Minimum		28,00	22,00	8,00	11,00	12,00	12,00
Maximum		35,00	33,00	29,00	35,00	27,00	27,00
Sum		925,00	771,00	595,00	745,00	604,00	614,00

From the results of statistical descriptive analysis, an average motivation of 30.8 was obtained. Self-Confidence 25.6. Anxiety Control 19.8. Mental Preparation 24.8. Team Attention 20.1 and Concentration 20.4. Subsequently, it is entered into the category that has been searched for the results based on the data obtained and the formula that has been determined.

The data obtained was analyzed in accordance with the criteria table so that psychological conditions were obtained in West Sumatra pencak silat athletes who will be prepared in the upcoming

championship to be further interpreted by researchers.

Motivation Level

The results of data from 30 West Sumatra pencak silat athletes related to the level of motivation obtained an average number of 30.8. The maximum number is 35.0. The minimum number is 28.0, and the standard deviation is 1.59. Furthermore, the results of the motivation category of West Sumatra pencak silat athletes are in the form of a histogram as follows:

Table 2. Motivation Categories

MOTIVATION		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	tall	29	96,7	96,7	96,7
	very high	1	3,3	3,3	100
	Total	30	100	100	

Based on the data above, it can be seen that the level of motivation in the categorization is very high as 1 person (3.3%) and the high category is 29 people (96.7%). According to the data above, most athletes have a high level of motivation.

Confidence Level

The results of data from 30 West Sumatra pencak silat athletes related to the level of confidence obtained an average number of 25.7.

The maximum number is 33.0. the minimum number is 22.0, and the standard deviation is 2.81.

Table 3. Confidence Categorization

CONFIDENCE		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	keep	24	80	80	80
	tall	6	20	20	100
	Total	30	100	100	

Based on the data above, it can be seen that the level of confidence in the medium categorization is 24 people (80%) and the high category is 6 people (20%). In accordance with the data above, most athletes have a moderate level of confidence.

Anxiety Control Level

The results of data from 30 West Sumatra pencak silat athletes related to the level of anxiety control were obtained with an average number of 19.8. The maximum number is 29. The minimum number is 8, and the standard deviation is 5.97.

Table 4. Categorization of Anxiety Control

ANXIETY CONTROL		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very low	4	13,3	13,3	13,3
	low	13	43,3	43,3	56,7
	keep	11	36,7	36,7	93,3
	tall	2	6,7	6,7	100
	Total	30	100	100	

Based on the data above, it can be seen that the level of anxiety control in the categorization is very low as many as 4 people (13.3%), in the low category as many as 13 people (43.3%), in the medium category as many as 11 people (36.7%) and in the high category as many as 2 people (6.7%). According to the above data, most athletes have low levels of anxiety control.

Mental Preparation Level

The results of data from 30 West Sumatra pencak silat athletes related to the level of mental preparation were obtained with an average number of 24.8. The maximum number is 35. the minimum number is 11, and the standard deviation is 5.07.

Table 5. Categorization of Mental Preparation

ANXIETY CONTROL		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very low	1	3,3	3,3	3,3
	low	10	33,3	33,3	36,7
	keep	13	43,3	43,3	80
	tall	6	20	20	100
	Total	30	100	100	

Based on the data above, it can be seen that the team's level of attention to categorization is very low as 1 person (3.3%), in the low category 10 people (33.3%), in the medium category 13 people (43.3%), and in the high category as many as 6 people (20%). According to the data above, most athletes have a moderate level of team attention.

Concentration Level

The results of data from 30 West Sumatra pencak silat athletes related to the concentration level obtained an average number of 20.4. The maximum number is 27. The minimum number is 12, and the standard deviation is 3.67. Based on the data above,

it can be seen that the level of anxiety control in the categorization is very low as many as 4 people (13.3%), in the low category as many as 13 people (43.3%), in the medium category as many as 11 people (36.7%) and in the high category as many as 2 people (6.7%). According to the above data, most athletes have low levels of anxiety control.

Categorization of Psychological Skills of West Sumatra Pencak Silat Athletes

The results of data from 30 West Sumatra pencak silat athletes on the motivation aspect were obtained with an average number of 30.8 in the high category. The confidence aspect obtained with an average number of 25.7 is in the medium

category. The aspect of anxiety control was obtained with an average number of 19.8 in the low category. The aspect of mental preparation was obtained with an average number of 24.9 in the high category. The attention aspect of the team was obtained with an average lift of 20.1 in the medium category. The concentration aspect obtained an average number of 20.4 is in the medium category. Based on the results of this study on psychological skills, in accordance with histogram data on the categorization of the motivation level of West Sumatra pencak silat athletes, which is high with a percentage of 96.7%, at the level of confidence of

Discussion

This study aims to find out how the psychological skills of West Sumatra pencak silat athletes and the factors that affect them. The aspects in psychological skills are motivation, confidence, anxiety control, mental preparation, team attention and concentration.

Motivation is an important aspect that supports athletes' performance in training and competing. The results of the analysis showed that the majority of athletes had high motivation with an average of 30.8. with a strong drive to achieve achievements. Athletes who are highly motivated tend to be more disciplined in their training, show perseverance in facing challenges, and have clear goals in their sports careers. As for the factors that affect it such as personality factors, situational factors, tendencies produced, emotional reaction factors, and outstanding behavioral factors,

Confidence is a crucial factor that determines the courage and confidence of athletes in competing. Most West Sumatra pencak silat athletes show a moderate level of confidence with an average of 25.6. Athletes with high confidence tend to be more stable in dealing with pressure, have good self-control, and are able to execute techniques more optimally. Therefore, a confidence-building strategy is needed through match simulations, positive performance evaluations, and other psychological approaches. Factors that affect confidence in the world of sports are mastery in developing or improving abilities in individuals by showing their abilities to opponents, preparing physically, and mentally, as well as social support and coaching leadership as well as experiences to see the state of athletes to achieve achievements

The analysis showed that some athletes had difficulty managing anxiety before and during the

West Sumatra pencak silat athletes in the medium category with a percentage of 80%, at the level of anxiety control of West Sumatra pencak silat athletes in the low category with a percentage of 43.3%, at the level of mental preparation of West Sumatra pencak silat athletes in the high category with a percentage of 53.3%, at the level of attention of the West Sumatra pencak silat athlete team in the medium category with a percentage of 43.3%, and at the concentration level of West Sumatra pencak silat athletes in the medium category with a percentage of 50%.

game. As evidenced by the results of the data on anxiety control, athletes were at a low level with an average of 19.8. Athletes with high levels of anxiety tend to experience concentration disorders, muscle tension, and feelings of doubt that can hinder their performance. Some of the factors that trigger anxiety include pressure from coaches or family expectations, negative experiences in previous matches, and lack of mental readiness. Athletes with good anxiety management skills are able to face competitive situations more calmly, maintain focus, and manage emotions more stably. Techniques such as breathing exercises, visualization, and pre-match routines become strategies that can be applied to improve anxiety control abilities.

Good mental preparation contributes to the stability of athletes' performance in various match conditions. Most of the pencak silat athletes in West Sumatra are at a high level with an average of 24.7. The results of the study show that athletes with mature mental preparation tend to have more targeted strategies, are able to anticipate

various match scenarios, and show better emotional control. However, there are still athletes who are less than optimal in their mental preparation, especially in terms of pressure management and long-term focus. Some athletes rely more on physical readiness and technique without considering psychological aspects, so they are easily affected by match situations that do not meet expectations. Therefore, more intensive coaching is needed in the mental aspect, including the use of mental imagery techniques, positive self-talk, and focus exercises in match simulation conditions.

Although pencak silat is an individual sport, the results show that most athletes have a moderate

awareness with an average of 20.1. of the importance of teamwork, especially in terms of training and preparation for competitions. Athletes who have a good relationship with coaches and training partners tend to be more motivated, get greater emotional support, and are better able to cope with stress. However, it was also found that some athletes were more individualistic and less active in interacting with the team. This can have an impact on the lack of social support needed in the face of competitive pressures. Therefore, strengthening the aspect of togetherness in the team through group training programs, joint strategy discussions, and improving communication between athletes and coaches is important to implement.

The ability to concentrate is the main factor in the success of a pencak silat athlete in facing

4. Conclusion

Based on the results of the analysis of the psychological skills of West Sumatra pencak silat athletes, the following findings were obtained:

Motivation with an average score of 30.8 is in the high category indicating that athletes have a strong drive to train and achieve achievements, both due to intrinsic and extrinsic factors. Athletes with high motivation tend to be more disciplined and have a strong determination in achieving goals.

Confidence with an average score of 25.7 being in the medium category indicates that some athletes still have doubts about their abilities, especially when facing tougher opponents or in pressured competitive situations. Anxiety control with an average score of 19.8 is in the low category indicating that many athletes have difficulty managing pressure before and during games, which can have an impact on decreased performance.

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opponents. Most West Sumatra pencak silat athletes are at a moderate level with an average of 20.4. Athletes with a high level of concentration are able to maintain focus for long periods of time, read opponents' movements better, and make quick and informed decisions. However, some athletes experience concentration disorders, especially when facing opponents with unexpected competition patterns or when facing pressure from spectators. In addition, the lack of control over external distractions is also a factor that affects the athlete's focus. To improve concentration, techniques such as mindfulness exercises, meditation, as well as simulating matches with various tactical scenarios can be applied in training programs.

Mental preparation with an average score of 24.7 in the high category shows that athletes have good strategies in preparing for the game, such as tactical planning and readiness to face various competitive scenarios.

Attention to teams with an average score of 20.1 being in the medium category means that athletes are aware of the importance of social support from the team and coaches, but there is still room for increased interaction and cooperation in the training environment.

A concentration with an average score of 20.4 being in the medium category indicates that the athlete has a fairly good focus in the game, but there are still factors that can interfere with concentration, such as external pressure and uncertainty of the opponent's strategy.

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