

Profile of Pencak Silat Competition Techniques: New Rules for the 2023 Cambodia Sea Games

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Abstract

Background and aim. The aim of this research is to conduct a comparison with previous studies and to identify the dominant technical actions in the 2023 SEA Games Cambodia elite-level pencak silat competition using the new PERSILAT 2022 regulations.

Methods This study employs a quantitative approach using observation-survey methods on 9 elite athletes, consisting of 5 male and 4 female athletes. Data were collected by observing match videos from the preliminary rounds to the finals, recording all technical actions (punches, kicks, and throws), and analyzed using SPSS.

Results. The findings indicate that side kick techniques reached 24%, front kicks 18%, and throwing techniques 28%. These results differ significantly from previous studies. Under the PERSILAT 2022 regulations, throwing techniques emerged as the most dominant action in pencak silat competitions.

Conclusions. The results can serve as a reference for coaches and practitioners in designing training programs by considering rule changes and the effectiveness of athletes' tactical performance to achieve optimal results.

Keywords: *New Rules; Pencak Silat Techniques; SEA Games Cambodia.*

1. Introduction

Martial arts can be defined as a part of the fighting and performing arts. Although originally developed as a means of self-defense, self-defense has been replaced by sporting and health-promoting aspects in recent years (Brudnak et al., 2002). Nowadays many people are interested in martial arts at home and abroad, namely MMA. Violent martial arts training (i.e. using body contact techniques), has become more popular over time (Origua Rios et al., 2018). Martial arts (MMA) is a sport with certain rules that involves fighting through punches, kicks and/or throwing, where participants try to physically defeat the opponent while avoiding being overcome (Ciaccioni et al., 2024). At first glance, pencak silat almost resembles this sport with a fighting style that does not allow hitting the head as a target. However, there are targets that are determined by attacking the body protector area with punches, elbows, kicks or slams (PERSILAT, 2022)

Pencak Silat is an Indonesian cultural heritage that needs to be preserved (Hadiana et al., 2022). One of the cultural heritages of Indonesia's ancestral

nation is Pencak Silat (Maryono, 2023; Sucipto et al., 2021). Pencak silat is part of Indonesian culture that has developed since the last century (Ediyono & Widodo, 2019). With the various ethnological and geographical situations and developments experienced by the Indonesian people, Pencak silat emerged as a culture in the concept of self-defense movement and became local wisdom for the bearers of this culture (Fatoni & Subekti, 2021). Pencak silat is an Asian martial art that has its roots in Malay culture (Soo et al., 2018). This martial art is widely known in Indonesia, Malaysia, Brunei and Singapore. Pencak silat is a martial sport with a full body contact character (Warthadi et al., 2022)

Examined in the values contained in Pencak silat, the sporting aspects become one aspects that are developing rapidly (International Pencak Silat Federation, 2013). Pencak silat has officially become an achievement sport that has been competed in single event and multi-event championships from national to international levels (Ediyono & Widodo, 2019). In Indonesia, the sport of Pencak silat has been officially competed in the highest caste of national competition, namely the

National Sports Week (PON). Apart from the national level, Pencak Silat has been competed in at the Asian Games, which is the highest level of Asian competition. Routinely,

Pencak silat at the international level is competed at the Southeast Asian level, namely at the Sea Games event. There are four categories of competitions in the sport of Pencak silat, including; Matches, Singles, Doubles and Teams (IPSI National Conference, 2012) . The competition category is the category where the most medals are competed for, where this category is divided based on differences in body weight (Rahman et al., 2022) . However, as it develops, regulations The match has undergone several changes, which of course affect the type or category of match, match system, and technical developments, for example the addition of one match category (creative solo) to the regulations (PERSILAT, 2022).

The existence of changes to the rules in Pencak Silat competitions will of course affect training patterns which need to adapt to existing regulations (Surbakti et al., 2022) . Apart from that, in preparing a training program, it is necessary to analyze the dominant movement demands and structures that occur during the competition phase (Hariyanto et al., 2023) . However, until now researchers have not found any valid information regarding the development of the demands of Pencak silat competition techniques with a new regulatory system, especially in the sparring category.

In previous research conducted by Dela Dela Kusumawati, (2022) challenging the technical performance of Pencak silat competitions using the 2012 IPSI National Conference regulation system, it was stated that the performance of male and female elite athletes had the following technical performance: The performance of punching techniques showed a value of $N = 288$, on average average action $(3,135 \pm 2,440)$. The performance of the sickle kick technique shows a value of $N = 288$, on average action $(2,958 \pm 2,250)$. The performance of the front kick technique shows a value of $N = 288$, on average action $(1,531 \pm 1,748)$

The performance of the side kick technique shows a value of $N = 288$, the average action is $(1,819 \pm 2,038)$. The performance of the back kick technique shows a value of $N = 288$, the average action is $(.0347 \pm .248)$. Performance the slam technique shows a value of $N = 288$, on average action $(.7465 \pm 1.016)$. Performance of the cutout technique shows a value of $N = 288$, average action

$(1,906 \pm 1,861)$. The performance of the sweeping technique shows a value of $N = 288$, the average of actions $(.281 \pm .652)$ (Dela Kusumawati, 2022) .

Pencak silat competitions between male and female athletes in various competitions as a whole have almost no differences in technique. However, in the current era, pencak silat regulations have undergone changes to competition regulations (Muhtar, 2020) . This can be seen from the declining performance of pencak silat athletes at the Sea Games championship in Hanoi by winning 1 gold medal, compared to the previous championship at the Asian Games in Jakarta with the old rule of Indonesian athletes winning 14 gold medals (Subekti et al., 2020).

This incident was caused by pencak silat athletes not having adapted to the new pencak silat regulations (Muhtar, 2020) , this is what affected Indonesian pencak silat athletes to be less than optimal at the 2021 Sea Games championship in Hanoi. Apart from the current events, many coaches assume that the implementation of training programs for pencak silat athletes has not yet adapted to the new pencak silat regulations (Sugiharto & Rejeki, 2023) . Coaches are recognized for their success in training if the athletes they coach can win and achieve high achievements. Apart from that, physical and mental abilities are very important for success and can have an impact on failure to achieve sporting achievements (Dongoran et al., 2020) . An athlete's success and failure in a match is influenced by the coach's training program (Subekti et al., 2021) . The importance of this research is that by analyzing and understanding the action profile of pencak silat competition techniques, it can help coaches and athletes to identify strengths and weaknesses in their fighting style. This opens up opportunities to improve performance through more focused practice and better strategy. This research is also expected to obtain a profile of match technique actions which can help in developing more effective training methods. By understanding the types of movements and tactics that work, coaches can develop training programs that improve an athlete's overall skills. Analysis of match technical action profiles can provide insight into effective strategies in various match situations. Athletes and coaches can use this information to develop better game plans, increasing the likelihood of winning in competitions.

The importance of research on the action profile of competition techniques contributes to scientific knowledge about pencak silat. This opens

up opportunities for innovation in technique and strategy, as well as enriching the scientific literature on pencak silat. Analysis of match technical action profiles can provide valuable input for the development or adjustment of match rules. A better understanding of the types of movements and techniques that are most effective can help federations or governing organizations in creating fairer and more comprehensive rules. Based on this idea, researchers were interested in carrying out comparative tests on the latest PERSILAT 2022 regulations. To find out the athlete's technical structure and deal with changes to the current regulations.

2. Method

This research uses a quantitative approach, with effective and efficient research methods, which presents administrative data in an ordered, integrated, accurate and accountable manner (O'Dwyer & Bernauer, 2013) . This research is descriptive research and a quantitative approach using observation or survey methods (Creswell, 2020) . Observations and surveys were chosen as a tool to compare data that was directly observed and assessed based on the attack movements in the old (2012 National Conference of IPSI) and new (PERSILAT 2022) regulations contained in the video being analyzed. This research aims to describe and analyze current phenomena regarding the renewal of the structure of pencak silat techniques. The sample of athletes observed was 9 Platnas pencak silat athletes with details of 5 male athletes (IC, KH, MZ, TH, & YA) and 4 female athletes (SD, JE, AT, & SW), the sample was chosen because the selected athletes had been selected in the national selection to become Indonesia's representative for the 2023 Cambodia Sea Games championship. This research was carried out in the Sports Education laboratory, Faculty of Teaching and Education, Muhammadiyah University of Surakarta, Gajahan Village, Colomadu District, Karanganyar Regency, Central Java 57176. The instruments used were based on the following table.

Table 1. Pencak Silat Attack Data Table

No	Technique	Indicator	Sub Indicator	Half Amount		
				P	S	F
1	Blow		direct			

No	Technique	Indicator	Sub Indicator	Half Amount		
				P	S	F
2	Kick	Side kick	Direct			
			holding			
			and			
			hitting			
			T kick			
		direct				
		holding				
		and				
		hitting				
		Balakgang				
Kick						
holding						
and						
hitting						
3	Drop	Slam	direct			
			holding			
			and			
			hitting			
			Cutouts			
		direct				
		holding				
		and				
		hitting				
		Jegalan				
		direct				
		holding				
		and				
		hitting				
		Sweep				
direct						
holding						
and						
hitting						
Counter						
direct						
Drop 2						
holding						
seconds						
and						
hitting						

Table 1 explain about research data collection instrument namely through observations on video match, all technical actions of punches, kicks and throws are recorded during the match period.

This observation was carried out for one month. The data analysis technique used uses the help of the SPSS 21.0 application which consists of

4 stages, namely (Descriptive Analysis), (Prerequisite Test), (Homogeneity Test), and (Hypothesis Test) (O'Dwyer & Bernauer, 2013) . The video observed was 9 pencak silat athletes competing in the sparring category at the Sea Games Cambodia Pencak silat championship 2023, researchers took 5 videos of matches in the men's category and 4 videos of matches in the women's category

(<https://www.youtube.com/@gebaylachannel918/videos>) from the *Sea Games Cambodia championship 2023* from the preliminary match to the final match during June 2023, the video only analyzed 9 samples from the preliminary match to the final match . The hypothesis of this research is that there are differences in the implementation of techniques in the old (2012 IPSI National Conference) vs. new (PERSILAT 2022) regulations.

3. Result

From the results of observations various techniques dominant when used match time. Of the 5 male athletes and 4 female athletes in elite level competitions at *the Sea Games* as follows.

Table 2. Movement Structure of Pencak Silat Competition Techniques

No	Name	Indicator	Number of Entry Techniques			
			Blow	Kick	Drop	
1.	I.C	16	23	22	61	
2.	KH	8	28	9	45	
3.	MZ	0	33	thirty	63	
4.	T.H.	7	56	23	86	
5.	YA	1	10	14	25	
6.	SD	5	21	20	46	
7.	JE	0	18	11	29	
8.	AT	2	18	13	33	
9.	SW	6	15	18	39	

Table 2. explains that the techniques used during matches vary to be able to see the dominant technique used during matches. The data is processed first in order to carry out comparison tests, therefore an assumption test is needed, namely: test data normality (*Kolmogorov-Smirnov*) and homogeneity test. Results normality and homogeneity test analysis. The performance of punching , kicking and throwing techniques for all athletes shows value sig 0, 200 > p 0.05. The hitting technique performance values are normally distributed. However, the results of the

homogeneity test of technical performance data show a sig. < p 0.05 (*Levene Statistics*), which means test the homogeneity of performance data stated No Homogeneous. The average technical action of hitting, slamming and falling is explained in the following table . To see the comparison results in this research, you cansee the percentage values for each individual in the following figure.

Table 3. Results of Comparative Analysis of the Movement Structure of Pencak Silat Competition Techniques

No	Indicator	Regulation		Q
		Persilat 2022 Mean ±Sd	National Conference 2012 Mean ±Sd	
1.	Blow	2.00 ±1.61	3.14 ±2.44	- 1,465
2.	Scythe Kick	4.53 ±3.26	1.53 ±174	3,248
3.	Front Kick	3.35 ±1.81	2.95 ±2.25	2,147
4.	T kick	1.95 ±1.87	1.81 ±2.03	0.125
5.	Back Kick	0.13 ±0.40	0.30 ±0.20	1,488
6.	Slam	3,500 ±1.78	0.74 ±1.01	8,236
7.	Cutouts	0.93 ±0.91	1.90 ±186	- 1,640
8.	Sweep	0.05 ±0.15	0.28 ±0.65	- 1.116

In the indicators for punches, sickle kicks, front kicks, T kicks, slams and cuts, the standard deviation values are smaller than the mean, so the data is less variable. T table (0.025; 5) = 2.571. This means that there is only a difference in the crescent kick and the slam.



Figure 1. Structural profile of elite level pencak silat competitions

Athletes often use in every match can be found represent as following: Technical performance (IC) obtained the highest percentage with kick technique at 23%. Performance (KM) obtained the highest percentage with kicking

technique at 28%. Performance (MZ) obtained the highest percentage with kick technique at 33%. Performance (TH) obtained the highest percentage with kicking technique at 56%. Performance (YD) obtained the highest percentage with the Drop technique at 14% . Performance (SD) obtained the highest percentage with kicking technique at 21%.

Performance (JA) obtained the highest percentage with kicking technique at 18%. Performance (AT) obtained the highest percentage with kicking technique at 18% . Performance (SW) obtained the highest percentage with the falling technique at 18% . To see athletes' technical actions in the 2022 Cambodia Sea Games pencak silat competition . It can be seen through the following image



Figure 2. Percentage of Actions

Figure 2. Output of technical performance analysis results for elite level pencak silat competitions at the 2022 Cambodian Sea Games can be represented as follows: The performance of hitting techniques obtained a percentage of 10.8 %. The performance of the side kick technique obtained a percentage of 24.1 %. Performance of the straight kick technique gains percentage of 17.7 %. The performance of the T kick technique obtained a percentage of 10.5 %. Performance of the back kick technique obtained a percentage of 0.8 %. The performance of the slam technique obtained a percentage of 28.3 %. The performance of the cutout technique obtained a percentage of 5.5 %. The performance of the sweeping technique obtained a percentage of 2.3.

Discussion

The results of the comparison test show that the average techniques for punches, T kicks, back kicks, cuts and sweeps in the new 2022 rules, get scores that are not too far from the old 2012 rules matches. While the crescent kick, front kick and slam in the new 2022 regulations have significant value, in the new 2022 regulations these three techniques become the dominant techniques used during the match. This can be proven by obtaining the Mean \pm S D value. Meanwhile, the dominant

technique used in the old pencak silat competition rules was the punch technique.

These results can be concluded that the throwing technique in elite level pencak silat matches in the new PERSILAT 2022 regulations , often used in pencak silat competition with a throwing technique percentage of 28.3 %

. while the back kick technique is a technique that is rarely used in pencak silat competitions Sea games cambodia 2023 with a back kick presentation of 11%. This result is important because the slam score is the highest score in a pencak silat competition where all athletes rely a lot on slams to collect scores. However, in the fighting category, pencak silat techniques include punches, kicks, locks and throws. In the new 2022 regulations, athletes need to make adjustments to the scoring system, emphasis can also be placed on mastering basic techniques such as footsteps, blocks, kicks and catches. In the new regulations, it is also necessary to pay attention to skills to get points so that when competing better in various combat situations (Warthadi et al., 2022).

Apart from that, in the new regulations, rules regarding match procedures, round duration, scoring system and security rules may be adjusted or updated (Nugroho, 2020) . With the new regulations, fighters and coaches need to prepare themselves differently. Training may have to cover new aspects that emerge in new regulations (Sugiharto & Rejeki, 2023) . Therefore, pencak silat is a cultural heritage that changes over time. The new regulations may reflect an effort to maintain the authenticity of this art while accommodating trends and changes in competitive sports (Syamsiah et al., 2020) . Discussions regarding the profile of technical actions in pencak silat with new regulations need to consider concrete changes in these regulations and how these may affect the art, competition, and the martial artists themselves. It is important to refer to the official regulatory documents of the relevant pencak silat organizations to gain a more accurate understanding of the latest changes and developments (Muslikhin et al., 2023).

4. Conclusion

Performance structure analysis results technique 2022 PERSILAT Regulation System Pencak Silat Competition for 10 athletes, 5 men and 5 women in the 2022 Cambodia Sea Games competition and a comparison test from previous research conducted by Dela Kusumawati (2022) . It was found that the performance of the crescent kick

technique, front kick and slam technique had a very significant value from the analysis and comparison results. These results shows that the technical performance of athletes in Pencak silat competitions it has a higher average value high compared to other techniques. Due to the limitations of this research, the researcher combined the 2 second counter technique into the slam technique in order to review previous research conducted Dela Kusumawati (2022). Those who researched Pencak Silat competition techniques in the 2012 National Conference regulations did not have a 2 second counter technique, therefore the researchers combined the 2 second counter technique into the slam technique so that this research could be compared with previous research. The research results can be used as a reference for Pencak silat trainers and practitioners in preparing action training program sessions tactics with consideration action changes in each round matches and tactical effectiveness of a winner at an elite level athlete.

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