**THE NEED ANALYSIS OF PENCAK SILAT SPEED KICK INSTRUMENT**

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**Abstract**

This study was to analyze the needs of coaches on kick speed of a pencak silat instrument based on the implementation and conditions of the instrument availability. This study used qualitative method because it provided detailed analyzes of informants. Subjects were 11 informants consisting of 10 coaches and 1 head of sport laboratory test from Faculty of Sport Science, Yogyakarta State University. The data collection techniques were in the forms of interviews and the documentation of the coaches and the head of the laboratory. The data analysis was conducted qualitatively by collecting information from the informants and reducing it to obtain the conclusion on the needs of coaches on kick speed measurement instrument in pencak silat. The result revealed that a pencak silat kick speed measurement was did in a traditional way i.e using stopwatch to count the amount of kicks for 10 seconds. In other words, an objective, valid, and reliable measurement was not yet administrated. Thus, the coaches realized the importance of such an instrument to measure the ability of athletes. Furthermore, the result of the chief laboratory's explanation showed the lack of instruments for measuring kick speed especially in pencak silat. In short, the coaches did need a kick speed measurement instruments in pencak silat.

**Keywords:** instrument, speed, kick, pencak silat.

1. **Introduction**

Sport is a physical and psychological activity that can improve or maintain the quality of a person's health or should we say, physical and spiritual health. A popular sport became one of the goals for someone to do sports such as; football, basketball, badminton, gymnastics, etc., but with the times is not only a popular sport that is followed by many people, but the traditi-onal sports did not lose competitiveness as a sport that attracts many. It is that exercise can be used as an educator, or having fun recreation, rehabilitation or repair the state of the body, and as an achievement in participating in various championships. In addition to popular sports, The original traditional sports culture of Indonesia namely pencak silat can also attract the attention of many people as a means to exercise. In accordance with the existence of pencak silat is the original martial culture of the Malay (Indonesia) inherited from ancestors to be preserved, developed, and nurtured by the people of Indonesia and other countries [1]. Seeing the development of pencak silat at this time, the indicator is the number of events or championships held on the level of the City/County until the Asian level champion-ship.

Pencak silat itself is derived from the arts, which means a movement of attack and defense in the form of dance, rhythmic shown publicly with the rules of courtesy that has been determined, while silat which means that the core of the arts, a science that is used in a fight or defend themselves with death - desperately that are not performed in general [2]. Along with the progress of time in the end of pencak silat can be displayed in public with rule that has been set by the Ikatan Pencak Silat Indonesia (IPSI). In the past pencak silat aims for survival against wild animals, but this time one of the objectives of pencak silat is to defend or maintain themselves as well as a venue for sporting achievement contested [3]. In reaching an achievement of athletes or students should be trained and evaluated, so that it can be seen in the ability to attack and defend himself from his opponent. In order for the kick can not be captured by the opponent, the kick must be done quickly. Based on this, we need an instrument or a measuring tool for measuring the speed of the kick.

The instrument is a mechanism to measure a phenomenon, which is used to make decisions, to collect and record information, and know the data from the end of treatment [4]. In another study explained that the instrument is a tool for fulfilling academic requirements, it can be used as a tool to measure an object measuring or collecting data about a variable [5]. Assessment instruments is important in the sport because as the tools used to collect information about the capabilities, interests and motivation of students or athletes to be measured.

In a literature explains that the principle of a measurement there are two important things that the validity and reliability [6]. Reliability refers to the consistency, accuracy, reliability, or reproducibility of the test results, then the validity refers to the meaning of the usefulness of the test results to be interpreted. Measuring instrument valid and reliable provide accuracy results measured against targets acquisition [7]. The measurement of the phenomenon is needed in many areas, including in the field of sports. Making the instrument begins by stating the specific purpose instrument that determines the purpose of the instrument and shows the content area to be assessed [8]. It is therefore necessary preliminary studies to obtain information that might be developed.

Pilot study was conducted with interviews of several pencak silat coaches. The results of the interview found that up to now to measure and determine the speed of the kick, the coach still use the gauge manually without using a measuring instrument that is more valid and reliable, even there are some interviews that states "an athlete at the end of the exercise program is rarely measured". Instrument valid and reliable measurement is indispensable coach to measure the ability of the athlete so by using a valid and reliable instrument will reduce data errors and may provide better results.

Based on the findings and results of these interviews, the researchers encouraged want to know more about measurements and availability of instruments for measuring the speed of pencak silat kicks.

1. **Method**

The method used in this study is a qualitative type of research is based on data that is expressed in words, opinions, descriptions, and others not at numbers [9]. Analysis of the kick velocity measurement conditions pencak silat performed in detail and depth to some informa, therefore the design of the study is a case study. The case study is a type of research that understan-ding approach to the case conducted an intensive, indepth, detailed, and compre-hensive [10]. A case study approach essentially focused on the case, these cases can be obtained from the emerging issues, a unique case, a special context, cultural, natural, holistic, phenomena and others.

Informants were selected as many as 11 the criteria as pencak silat coaches in the area outside Yogyakarta and Yogyakarta Special Region were 10 coaches and 1 head of the laboratory tests are measurements of the Faculty of Sport Science, Yogyakarta State University. As for where the study was conducted in Yogyakarta in April 2018. Site selection is done with the consideration that the Yogyakarta in practice always active and some events are often won and became the overall champion either national or international level besides Yogyakarta often hold good champion-ship level City / Regency and National level.

Data collection techniques in this study using interview techniques and documen-tation. This interview was conducted against the informant in order to know and look for more detailed information about the evaluation and measurement of the speed of pencak silat kick, and availability of the instrument. While the documentation is done to understand the evidence concerning the implementation of the measurement conditions and the availabi-lity of speed measuring instruments pencak silat kicks. The data were analyzed qualitatively with the gathering of data related to pencak silat kick speed instrument, then reducing it by selecting the data needed to further described and presented in order to obtain a conclusion [11].

1. **Research and Discussion**

The results of the study will be discussed in this section on the implementation of the measurement and evaluation of pencak silat kick speed and availability of pencak silat kick speed instruments. Here are the results obtained from the interview coach and part laboratory measurement tests Faculty of Sport Science,Yogyakarta State University.

* 1. **Coach**

Based on interviews with coaches obtained some information that is:

1. The entire coach selected as informants in this study had experience as a coach and has licensed both the local level national coach both held in Yogyakarta or outside. Aside from the coaches at least the athletes he coached to victory in every championship, and thus between the license and the results can be a capital in the training of athletes
2. Implementation instrument speed kick pencak silat do better when there is no competition or approaching the compe-tition, meaning that measurement to determine the level of speed kick the athlete is still done by the coach without looking at the schedule the championship and at the end of the exercise program, the implementation of the measurement can also be performed when the current talent scouting or selection recruitment of athletes ,
3. Most trainers explain that rarely or never measured regularly speed kick pencak silat, because there is no more appropriate instrument.
4. Measurement speed pencak silat kick was played directly by counting the number of kicks for 10 seconds and picking up the most. This is often done by the coach in order to determine the success of the exercise program that has been given to the athlete.
5. The trainer explains the importance of an instrument or tool pencak silat kick velocity measurement in order to serve as guidelines for coaches to determine the success of a training program has been prepared. From this description it is clear that the coach wants to get or have the instrument.
6. The coach felt desperately need their instruments for measuring the speed of pencak silat kicks.
7. The coach explained although there has been an instrument but there is no instrument is more valid and reliable to determine the speed of the pencak silat kicks. Related to the implementation of instruments coaches want to have and use it.
	1. **Head of Laboratory**

Interviews were conducted on laboratory sections, especially in the sports measurement test laboratory Faculty of Sport Science,Yogyakarta State University, this is done to obtain information and to confirm the truth proclaimed the pencak silat coaches. The results of the interview obtained information that there are some measurement instruments of all instruments of speed but the speed has been no instrument to measure the speed of a kick, especially pencak silat. Speaking of the instrument is the same, but every sport has a specification of movement and not so common, and so in every sport must have a measuring instrument or similar instru-ments.

The head of the laboratory of the Faculty of Sport Science, Yogyakarta State University also explains although there is the instrument does not necessarily have a good validity and reliability, because each instrument has disadvantages of each, especially if the instrument is still manual will result in a larger data errors. In addition, the laboratory is also clear that the importance of such an instrument in the measurement, so that the laboratory supporting the development of pencak silat kick velocity instrument with a different model of digital or technology will be great.

Based on the results of interviews that have been made against the coach and the head of the laboratory can be concluded that the coaches do not yet have and use a measuring tool or instrument to determine the result of the ability of athletes, and yet have an instrument that is more valid and reliable, so the coaches also evaluate athletes with what equipment existence. The head of the laboratory also gave an explanation that suggested to do the development in order to create new knowledge in the field of technology and will be able to assist the trainers in the process of evaluation and measurement.

* 1. **Description availability pencak silat kick velocity instrument**

In order to determine the extent of the progress or result of exercise can increase the speed of the athletes kick pencak silat, it takes an instrument to measure it. Based on these Firdaos line with the opinion stating that the instrument gives a very important role in determining the quality of a measurement [12]. An instrument is said to be good if valid and reliable. This statement is in accordance with some studies explain that the main indicator of the quality of the measuring instrument is the validity, reliability [13], [14]. Validity refers to the extent to which an instrument can measure exactly what we want to measure. Reliability or reliability relating to the accuracy of the measurement procedure. Practicality related to various economic factors, convenience, and interpretation.

The results of the searches related to the availability of instruments speed kick pencak silat in laboratory tests measuring the sport is known that during this unprecedented development of specialized instruments speed kick pencak silat, so that laboratories do not yet have such instruments, from several references contained instrument speed kick pencak silat but these instruments still manual so that the data error will be larger and there is an error in judgment.

Based on these conditions can be that there is a gap between the needs of practitioners or trainers with the availability of measurement instruments. Thus we can conclude the impor-tance of the development of pencak silat kick velocity instrument to facilitate trainers to measure or evaluate the exercise program and can determine it goes.

1. **Conclusion**

Based on the results, it is concluded that there are instruments for measuring the speed of pencak silat kick to manual without any guidance that is more valid and reliable. The coach felt that it was important in the measurement instrument in this context to the speed of pencak silat kicks to measure the success of an exercise program, so that the coach is in desperate need of the availability of the kick velocity instrument. Furthermore, the conclusions obtained from the head of the laboratory tests measuring sport Faculty of Sport Science, Yogyakarta State University fact that the unavailability of an instrument for measuring the speed of a special kick pencak silat. The conclusion that the gap between the needs of the coach with the condition of availability of instruments so we need a development instrument pencak silat kick velocity.

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