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

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**Abstract**

Pencak silat is a sport that requires a fast movement, so as to measure the speed of the attack require a measuring instrument or instruments, but if the practitioner requires it to support his training program. Thus, this study aims to analyze the needs of the coach on the instrument pencak silat kick speed as seen from the implementation and conditions of supply of the instrument. The object of this study were 11 informants consisting of 10 coaches and 1 head of laboratory tests measuring sport Faculty of Sport Science, Yogyakarta State University. The method used is qualitative analyzes information from multiple sources. The collection of data obtained through interviews and documentation of the coaches and the head of the laboratory. The data analysis is conducted qualitatively by gathering information and then reducing it to obtain the conclusion of the coach needs related special kick speed measurement instrument pencak silat. The results of this study indicate that pencak silat kick speed measurement during a stopwatch to count the number of kicks for 10 seconds without the use of instruments more objective, valid, and reliable. The coach also stated the importance of such an instrument in measuring the ability of athletes. Head of the laboratory also explain the lack of instruments for measuring speed, especially pencak silat kicks. Based on these results it can be concluded that the coach needs a kick speed measurement instruments pencak silat.

**Keywords:** Instruments, 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 traditional 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 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 cham-pionships held on the level of the City/County until the Asian level championship.

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 kaedahyang 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].

Pencak Silat has some of the techniques used in game one kick. As for the kind of - kind of kick that is; front kick, rear sickle, and "T" [17]. Kick technique is often used when playing, because tendagan has a value greater than the blow. 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 speed 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 understanding approach to the case conducted an intensive, in-depth, detailed, and compre-hensive [10]. A case study approach essentially focused on the case, and this case can be obtained from the emerging issues, a unique case, a special context, cultural, natural, holistic, and other phenomena.

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, in addition to Yogyakarta often hold good championship level City/County as well as national level.

Data collection techniques in this study using interview techniques and documentation. 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. In an interview researchers can conduct a face-to-face and requires only general questions unstructured and open-ended it is done to get information, opinions, and views of informants [15]. While the documentation is done to understand the evidence concerning the implementation of the measurement conditions and the availability of speed measuring instruments pencak silat kicks. The data were analyzed qualitatively with the gathering of data related instruments pencak silat kick speed,

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 competition, 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 speed 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 instruments.

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 speed 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 speed instrument**

In preparing the athlete's ability then the coach must be able to meet an athlete needs, one of which determine the extent of progress or results of the athlete after the exercise program given period of time. Components of the physical conditions in the sport of pencak silat is needed for the implementation of motion technique performed must quickly and suddenly [16]. Therefore we need an instrument for measuring the speed of the kick, it is clear that the coach can not escape from the measuring instrument. 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].

Information from several parktisi above that at the time of exercise for athletes rarely known ability, so coaches do not know who created the exercise program is appropriate or not by the needs of the athletes. No wonder if the appearance is not the maximum field athletes often we see an athlete is never a shot during a match, it happened because of the ability to do a kick is not owned. 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.

Each measurement coaches do not want the tools difficult to use and test results can be dipercara keakurasinya. At the interview, the coach is confused, as long as it does not have a more accurate measuring tool or right. By using a measuring tool akaurat the results obtained also in accordance with taletnya capabilities.

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 the results of interviews obtained by researchers, that there is a gap between the needs of practitioners or trainers with the availability of existing measurement instruments. It can be concluded the coach does not have an instrument that is more objective, valid, and reliable. Apart from that the coach also needs ukut tool or instrument in the training process in order to know the results of his training. A description of some coaches remind us the importance of the development of pencak silat kick speed instrument to facilitate trainers to measure or evaluate the exercise program and can determine it goes so that athletes who trained entitled to the maximum speed.

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 speed 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 speed.

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