

Comparison of Psychological Skills of Pencak Silat and Boxing Athletes (Study on Indonesian Training Camp athletes)

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Abstract—This study aims to compare the psychological skills between pencak silat and boxing, so that differences in each of the sports will be known to analyze which psychological skills differ significantly. The population in this study were Indonesian athletes who were in the National Training Camp. The sampling technique used purposive sampling with a total of 33 athletes consisting of; Pencak Silat 22 athletes, Boxing 11 athletes. This study used the Ex-post facto method with a retrospective causal-comparative design. Data collect using the Psychological Skills Inventory for Sports (PSIS) questionnaire. The comparison results show there are differences of psychological skills in aspects of self-confidence, control of anxiety, mental preparation, team emphasis, and concentration. But there is no difference of psychological skills in the motivational aspects.

Keywords—*sports psychology, asian games, martial Arts*

I. INTRODUCTION

Improvement of performance in the field of sports is a very complex study in addition to required adequate facilities and infrastructure also needed support for sports science and technology. Sports psychology is one of the seven fields of theory that are the body of knowledge of sports science [1].

Sports performance is a high-level competition that demands excellent quality of athletes not only in terms of technique, physical, but more important in psychological aspects. [2]Athletes must have the psychological skills and moral needed by the sport they practiced they for achievement. Some with [3]"In hard sports like boxing or taekwondo, the characteristics of aggressiveness must be possessed".

It was concluded that martial sports had a higher characteristic of activity and aggressiveness in general. The personality of martial sports athletes has a discipline value that is more prominent when compared to the value of cooperation and sportsmanship[4].

Martial sports are divided into several sports that have different movements, rules, cultures and types. In the sport of Pencak Silat with Boxing the difference is clearly seen in the arena of competition, rules, movements, clothing, and how to get points. This certainly will distinguish how athletes practice and the formed of psychological skills from athletes in each sport. As Trulson revealed [5] that the practice of traditional martial arts has a positive influence on participant personality traits compared to modern martial arts. Traditional martial arts practitioners emphasize humility and have a high level of motivation to complete hard tasks compared to those involved in modern martial arts[6].

The above study shows that the psychological aspects that are formed towards each athlete of the martial arts differ from one another. [7]Taekwondo athletes have better anxiety control than pencak silat athletes, taekwondo athletes have emphasis team and concentration better than pencak silat, but pencak silat athletes have high motivation compared to taekwondo.

The Compete experience, training process, skill level, age, personality, competition rules and motion assignments that must be carried out between one martial sport and another to distinguish each sport. Regardless of the various differences, as for some psychological aspects that need and influence the appearance is: motivation, self-confidence, anxiety control, mental preparation, emphasis team, and concentration[8]. Then these psychological aspects were developed into instruments to measure athletes psychological skills in a specific sports context. Furthermore, this instrument is called the Psychological Skill Inventory for Sport (PSIS-R-5).

Thus the dimensions of the athlete's psychological skills are possibility different between Pencak Silat with Boxing. Knowledge and understanding of the athletes psychological skills to support in the context of fostering national athletes is very important for the coaches to know to help the optimal athlete in every appearance. To obtain accurate data,

this study focuses on athletes who are in the National Training Camp.

II. LITERATURE REVIEW

A. The Psychological Skills

Psychological skills also called mental skills are systematic strategies and methods that are intentionally designed to improve the performance of athletes by improving their mental or psychological skills. Mental skills training in sports is designed to produce athletes conditions and psychological skills that will lead to improved performance[9].

Factors related to successful performances in matches are closely related to athlete mental toughness[10]. Refer to the opinion that mental toughness is a mental skill that athletes must possess. Athletes who have mental toughness mean that the athlete has good mental skills to deal with the various challenges and pressures athlete's faces, especially when in matches.

Martial sports competitions have the speed of movement and information processing, and the need to quickly adapt to changing environmental demands requires persistence, very high concentration, high self-control and is responsible for performance results[11]. Mental skills are learned, not inherited. Unlike personality traits, psychological aspects can be studied and determined accordingly, and are vulnerable to counseling interventions[12]. In other words, the athlete's psychological skills are important and must be possessed and learned in martial sports athletes because of the characteristics contained in the sport.

Just as physical exercise, training psychological skills such as maintaining focus, setting arousal levels, increasing confidence, and maintaining motivation need to be systematically trained. The results of observations by Gould, Eklund, and Jackson in[13] that optimal performance has characteristics called concentration, ability to focus, deep involvement in tasks, full awareness of carrying out tasks.

Some studies explain that psychological skills have an important role for the success of athletes. Psychological skills that influence the athlete's success or appearance include intrinsic motivation, self-confidence, controlled attention, controlled arousal, controlled anxiety, and self alertness[14].

In this research psychological skills that will be studied to compare between Pencak Silat and Tinju are: motivation, confidence, anxiety control, mental preparation, team emphasis, and concentration.

B. Essence Martial Sports Pencak Silat dan Boxing

Pencak silat is an achievement sport consisting of four categories, namely the sparring, single, double and team categories[15]. Pencak silat is a self-defense performance (skill) that employs the ability to defend itself, fend off attacks and ultimately attack enemies, with or without weapons. Pencak silat and today apply as a national term which was standardized at the time of the establishment of a union of pencak and silat institutions in Indonesia at a meeting in Surakarta in 1948 which gave birth to the Indonesian Pencak Silat Association (IPSI).

Boxing is a martial sport including intermittent sports that are characterized by short duration, high intensity activities but require high physical fitness, by developing as well as possible an aerobic and anaerobic system. In boxing, it takes 70-80% anaerobic and 20-30% aerobics[16]. Boxing is also a sport that is contested where both participants try in a position or place, so they can master the opponent and can hit the maximum number of times until superiority is achieved. Boxing matches teach to always compete sportsmanship to be able to overcome the opponent well, then a boxer must have a punch speed and maximum motion. Some punches in boxing like jab, hook, straight, and uppercut.

III. METHOD

The method uses survey with ex post facto research designs. The research location of the implementation of the National Training Camp, namely: Pencak Silat at the Bukit Indah Hotel Cianjur and Boxing at ISTC Sukabumi, the West Java.

The research population is Indonesian athletes who will be prepared for the Asian Games. The sampling technique used purposive sampling with the criteria of National Athletes having obtained SK. The sample was 33 athletes consisting of 22 Pencak Silat athletes and 11 Boxing athletes.

The technique of collected data uses an instrument "The psychological Skills Inventory for Sport" (PSIS-R-5). The instrument revealed six psychological skills, that is: motivation, self-confidence, anxiety control, mental preparation, team emphasis, and concentration, which is also the single variable of this study is psychological skills.

Scoring of the subject's answers to the instrument, the score moves from one to five by attention to the trait of the questionnaire/instrument whether it is favorable or unfavorable. The details of the Instrument research item can be seen in the table below.

TABLE I. INSTRUMENTS RESEARCH

Psychological Skills	Item
Motivation	8
Confidence	7
Anxiety Control	7
Mental Preparation	6
Team Emphasis,	4
Concentration	6

The instrument was first tested with the aim of selecting items and seeing how far the instrument could reveal the variables to be measured in collecting data on actual research. Then the researcher make a criteria for psychological skills as a reference using the formula $Mi=(ST+SR)/2$ and $SDi=(ST-SR)/6$. The criteria determination table can be seen as follows:

TABLE II. FORMULA OF CRITERIA DETERMINATION

Interval	Category
$Up (Mi + 1,8SD) \text{ s.d. } (Mi + 3SD)$	Very High
$Up (Mi + 0,6) \text{ s.d. } (Mi + 1,8SD)$	High
$Up (Mi - 0,6SD) \text{ s.d. } (Mi + 0,6SD)$	Medium
$Up (Mi - 1,8SD) \text{ s.d. } (Mi - 0,6SD)$	Low

(Mi - 3SD) s.d. (Mi - 1,8SD) Very Low

Based on the formula for determining the criteria above, then for each psychological aspect the following criteria table is obtained:

TABLE III. CRITERIA OF ASPECTS PSYCHOLOGICAL SKILLS

Aspect Psychological	Category				
	Very High	High	Medium	Low	Very Low
Motivation	33,59-40	27,20-33,59	20,80-27,20	14,40-20,80	8-14,40
Confidence	29,41-35	23,80-29,41	18,20-23,80	12,59-18,20	7-12,59
Anxiety Control	29,41-35	23,80-29,41	18,20-23,80	12,59-18,20	7-12,59
Mental Preparation	25,20-30	20,40-25,20	15,60-20,40	10,80-15,60	6-10,8
Team Emphasis	16,81-20	13,60-16,81	10,40-13,60	7,19-10,40	4-7,19
Concentration	25,20-30	20,4-25,20	15,60-20,40	10,80-15,60	6-10,8

The data obtained were analyzed according to the criteria table so that the categories in each sport branch were obtained to further compare and interpret researchers.

IV. RESULTS AND DISCUSSION

The results of the descriptive analysis the psychological skills of Indonesian athletes of Pencak Silat as follows:

TABLE IV. PSYCHOLOGICAL SKILL RESULTS

Pencak Silat		
Aspect Psychological	Mean	Category
Motivation	36,5	Very High
Confidence	27,6	High
Anxiety Control	24	High
Mental Preparation	23,4	High
Team Emphasis,	13,8	High
Concentration	22	High

Based on Table IV, The results of the psychological skills of athletes Pencak Silat in the motivation aspect obtained mean score of 36.5 Very High category. Self-confidence aspects obtained mean score of 27.6 High categories. The aspect of anxiety control obtained a mean score of 24 High categories. The mental preparation aspect obtained a mean score of 23.4 High categories. The Emphasis team aspect obtained mean score of 13.8 High category. The concentration aspect obtained a mean score of 22 High categories.

The results of the descriptive analysis the psychological skills of Indonesian athletes of Tinju as follows:

TABLE V. PSYCHOLOGICAL SKILL RESULTS

Boxing		
Aspect Psychological	Mean	Category
Motivation	36,2	Very High
Confidence	25,3	High

Boxing		
Aspect Psychological	Mean	Category
Anxiety Control	22,6	Medium
Mental Preparation	20,4	Medium
Team Emphasis,	12,2	Medium
Concentration	19,27	Medium

Based on Table V, The results of the psychological skills of athletes Tinju in the motivation aspect obtained mean score of 36,2 Very High category. Self-confidence aspects obtained mean score of 25,3 High categories. The aspect of anxiety control obtained a mean score of 22,6 Medium categories. The mental preparation aspect obtained an mean score of 20,4 Medium categories. The Emphasis team aspect obtained mean score of 12,2 Medium category. The concentration aspect obtained an mean score of 19,27 Medium categories.

The psychological skills above are then displayed in the form of images, to compare the differences in psychological aspects between the sport of Pencak Silat and Boxing which will be shown in the following figure:

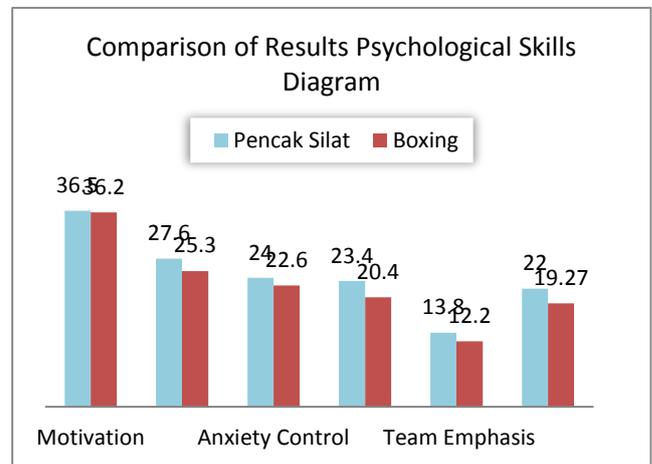


Fig. 1. Comparison Of Psychological Skills

In the picture above show from the six psychological aspects of the sport of Pencak Silat having a higher average value than the boxing sport. Comparisons based on table categories show there are significant differences in aspects of anxiety control, mental preparation, team emphasis, and concentration. The four aspects, Pencak Silat is in the High category while Boxing is in the Medium category. This study also supports [17] research which states that there are psychological differences Among martial sports. Not only on the psychological aspect, further research on physical aspects that distinguish between tribes and culture also has differences in physical fitness [18].

The results of the comparison on the control aspects of the anxiety of Pencak Silat athletes are better than those of Boxing athletes. [19] Anxiety is a feeling of tension caused by a stressful situation. Analysis of the instruments of The Psychological Skill Inventory for Sport found that Boxing athletes often panic just before they will appear and Athletes feel nervous because they will start performing. This type of anxiety is Competitive anxiety, which is the anxiety felt by athletes in the match or tournament situation that will be faced[14].

Sports anxiety can have a negative impact on athletes especially on performance in matches. Therefore we need strategies in the form of mental training techniques in boxing athletes in controlling sports anxiety. These results reinforced the research by Jones, Hanton and Connaughton[20] interview 10 elite martial arts athletes found that in general athletes who performed better were more consistent and better than opponents in the aspect of anxiety control.

The above results are also related to the aspect of mental preparation which states that Pencak Silat athletes are better than boxing athletes. There is a correlation between the low anxiety control aspects of boxing athletes with mental preparation in the Medium category. Reinforcement the findings of researchers who in practice there were no mental trainers accompanying athletes, athletes only practiced mental independently.

Specifically, no programs have been designed that are systematically and continuously designed so that athletes can control and practice mental skills that are useful for improving performance in boxing athletes.

The results of research showed that 81 percent of elite athletes from several countries explained that mental preparation was very important in the competition[21]. Furthermore, 44 percent athletes explained that performance was determined by the application strategies and mental preparation techniques[22]. In martial sports, mental planning is an integral section of match preparation, starting and maintaining optimal performance during matches, and even after matches. Therefore strategies are needed in the form of mental training techniques in managing anxiety, such as; imagery, positive self-talk, progressive muscle relaxation and others to improve athletes mental preparation and improve the athletes mentality.

The Team Emphasis aspect that pencak silat athletes were far better than boxing athletes. Pencak silat and tinju are individual sports even though there are several pencak silat numbers in the category of matches, single art categories, multiple art categories, and team art categories, but to performance success requires collaboration in the athletes environment.

Coaches, teammates and parents form a major source of social support. Social support provides a warm and positive group climate where it functions through constructive interactions with others[23].

Pencak silat and Tinju are incorporated in a National training camp, thus enable athletes to discuss their problems to find information through questions and engage in discussions that are useful for reducing anxiety and controlling with stress, and maintaining desired self-confidence, motivation and emotional want it. Strategies are needed by all elements to maintain the warmth of a team to provide positive reinforcement for athletes even though the sport of pencak silat and boxing are individually matched.

The concentration of pencak silat athletes is better than boxing athletes. [24]Concentration is the ability to focus on tasks and not be disturbed by stimuli that are both external and internal. Martial sports competitions require "intensity management", which is a short period of very high concentration and physical energy.

Boxing athletes must be able to anticipate their opponents actions and strategies, feel incoming stimuli and then make quick decisions, and respond automatically. Boxing only has three minutes per round, face to face with a distance that is only a few inches from the opponent that requires gathering information and analyzing the opponent quickly. The nature of competition in martial sports such as boxing has a very high concentration level. Successful martial sports athletes have a high level of concentration to be able to achieve and survive in this sport. So that with the results of the study showing Boxing athletes in the Medium category it is necessary to be comprehensively evaluated.

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