

Identifying potential and talented athletes in Tarung Derajat: A psychological perspective test

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ABSTRACT

Identifying talented athletes is crucial for coaching and developing athletic talent in sports. Psychology plays a significant role in influencing athletes' performance therefore it deserves attention in the identification process. This study aimed to identify potential athletes with the best abilities according to Tarung Derajat's characteristics through a psychological perspective test. The research employs a survey method with a descriptive quantitative analysis approach. The SPQ20 questionnaire was used as the data collection instrument. The results of the psychological test were converted into percentages to determine the athletes' potential, ranging from very potential to not potential. The research sample consisted of athletes from the training unit in the Semarang City area. The categorization criteria were based on norms derived from the highest-achieving athletes at the national level in Central Java province, with Tarung Derajat being the highest level. The findings indicated the following percentages for the achievement components: 68% for achievement, 66% for competitiveness, 62.9% for managing pressure, 67.78% for self-efficacy, 63.73% for fear of failure control, 63.83% for stress management, 65.56% for emotion, 70.33% for empathy, 54.40% for power, and 67.73% for aggressiveness. Based on a psychological perspective, this research concludes that 50 athletes (64%) in the training unit demonstrate potential as talented athletes. It is important to note that this study was limited to Tarung Derajat athletes in Central Java Province. The research findings contribute to the Central Java Tarung Derajat Training Centre by facilitating the categorization of athletes' talent based on psychological aspects. Further, research was recommended to explore talent and potential of athletes from other perspectives not covered in this study.

Keywords: Psychological perspective; potential athlete; tarung derajat

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INTRODUCTION

The process of identifying talented athletes, then including them in an organized and conceptualized training program is the most important thing in sports (Cahyono et al., 2021). If a prospective athlete has participated in a particular sport and is known to have talent in that sport, then this is more accurately called talent development (Megicks et al., 2023). Factors that affect achievement in sports arise from within and outside. For example, external factors can be classified into social and non-social factors (natural

environment and equipment), while internal factors consist of physical and mental originating from the quality of the athletes themselves (Muslim et al., 2020). Psychological aspects and experiences can also affect performance. On the other hand, psychological factors, control management has a significant influence on improving sports achievement (Syaifulah et al., 2022). Psychological skills include the structured and prepared behaviors and thoughts used by athletes to control their personal psychological state (Musculus & Lobinger, 2018).

The main problem is recruitment athletes in Indonesia only based on the results of the match (Syaifulah & Doewes, 2020). Talent development systems are also subject to high uncertainty regarding their outcomes and future impacts (Bjørndal & Ronglan, 2021). In another study, it was explained that the development of an effective athlete really needs to consider the complex interactions between people, tasks, and the environment (Gledhill et al., 2017). Athletes need a long journey to develop themselves into superior and professional athletes (Coutinho et al., 2016) In determining the right type of model in the talent development process, the important steps that must be taken are: talent conceptualization that is, talent can be defined as an individual's potential or capacity to excel in a particular domain that requires specific skills, performance, and training (Den Hartigh et al., 2018).

Talent is an important factor in achieving sports achievements so that in the development process various giftedness tests must be carried out to be able to see the dominant talent that is owned by athletes (Coutinho et al., 2016). Identification of sports talent can no longer rely solely on subjective observations and judgments from coaches, but it must be carried out by means of tests through supporting selection to be able to see the talent of prospective athletes (Sayfei et al., 2020). Through talent identification, one can find talented candidates, can select prospective athletes at an early age, can continuously monitor talented athletes, and can help prospective athletes talented to achieve high achievements (Xiang et al., 2022). Therefore, the high achievement can be achieved if talented athletes are found from the start in accordance with the sports they study (Sukendro & Ihsan, 2018).

An external factors such as training activities, the quality of the trainers who train the athletes, the facilities and infrastructure that support the implementation of systematic training, and the funding which is a factor support for the implementation of goals or an organization are also very important (Bonat et al., 2020). Responsible institutional organization center in collecting, fostering achievements, and coordinating all martial arts activities, in Indonesian it is called Keluarga Olahraga Tarung Derajat (KODRAT) in order to advance sports achievements, always trying to advance combat sports by holding competitions or competitions, in addition to that, a selection of outstanding athletes is held through the Tarung Derajat Training Centre Unit.

An approach that focuses on identifying and developing talent athletes from scratch to become future sports superstars. This system is commonly known as the talent identification and development system (Williams et al., 2020). Important current steps that need to be taken for the development of sporting talent could include establishing and implementing a clear philosophy that values long-term development such as improving the ability of athletes (Rongen et al., 2018). Previous research results showed that the talent identification and development system, although aimed at improving sports performance, however it certainly has an impact on physical health, education, and psychosocial development in young athletes (Till & Baker, 2020). The results of talent identification and development system are varied, for sure there are positive or negative impact. Because only a limited number of athletes can reach the elite level of sporting success. The role of sports discipline coaching organizations is very important, related to the form of support both financially and suggestions and input and so on (Rongen et al., 2018). One of the studies found on the development of questionnaires related to the athletes' environment in the talent development effort. This questionnaire had been designed to facilitate the development of sporting potential to world-class standards. The questionnaire measured the experience of developing athletes in relation to empirically identified "key features" of the talent development environment one has (Andronikos et al., 2021).

The novelty in this study lied in the aspects that are examined, namely the psychological aspects of the athletes who have entered a training camp. Their psychology was tested, to see how their talent competence was to reach a higher level in the number of Tarung Derajat being contested (Suryadi et al., 2022). The

development of psychological aspects such as the development of intelligence, personality, motivation, behavior, attitudes, feelings, emotions, ideals, also affects the performance of Tarung Derajat athletes. Previous studies that had been conducted related with psychology in athletes include “the personality of pencak silat athletes” was conducted and showed that most athletes in pencak silat have a good criteria in their personality (Wahyudi & Mahendra, 2020). Another research that had been conducted is related with Comparison of Athletes Personality between Martial Art Sports in Central Java, the result only explain about Pencak Silat, Karate, and Taekwondo (Kusuma et al., 2019). The difference with this research was that the psychological aspects of athletes were examined to find out how big the impact is on the talent readiness of the Tarung Derajat athletes, especially in the Central Java provincial training center.

The purpose of this study was to identify potential and talented athletes who have the best abilities according to the characteristics of Tarung Derajat through a psychological perspective test. This research needs to be carried out as a material for consideration and alternatives for coaches and sports coaches, especially Tarung Derajat. To be able to assist them in identifying athletes who are already members of the training camp, who have psychological readiness and have better talent than other athletes, in order to prepare efforts to increase the achievement of these sports at a higher championship level. It is important to note that several psychological elements in athletes greatly influence the achievement and development of the athletes’ talent and skills. Based on some of the explanations above, it is deemed necessary to develop a test instrument for fostering the potential development of athletes, especially Tarung Derajat. Indirectly, this research contributes as an alternative way for combat sports coaches to identify the psychology of their athletes before being prepared for a higher level championship.

METHOD

The method used in this research was survey with descriptive quantitative analysis approach, in accordance with the aim of being able to obtain complete data as desired. This study used a survey form of psychological tests for potential athletes. All athletes who were members of the Tarung Derajat training center in Semarang City, became respondents in this study. total sampling used in this study. Data collection techniques in this study used psychological test techniques with the SPQ 20 test instrument taken as part of the SPQ 20 component (Zourmand & Changzhu, 2017). The test items taken in this study were achievement, competitive, managing pressure, self efficacy, fear failure control, stress management, emotion, empathy, power, and aggressiveness with the following details:

Table 1. Test Items

No.	Psychology Criteria SPQ20	Total Questions
1	Achievement	6
2	Competitive	9
3	Managing Pressure	10
4	Self Efficacy	12
5	Fear Failur Control	5
6	Stress Management	8
7	Emotion	6
8	Empaty	7
9	Power	5
10	Aggressiveness	8

The data analysis technique that had been used in this study was the descriptive percentage analysis technique, namely by looking at the total value of the test results and matching it with a table of criteria for someone's giftedness so that the conclusion is drawn that someone has the potential for combat sports to be developed using the following formula:

Table 2. Identification of Potential Athlete Psychology

Category		
Very potential	$> M + (1.5SD)$	> 304
Potential	$M + (0.5SD) - M + (1.5SD)$	253 - 304
Enough	$M - (0.5SD) - M + (0.5SD)$	201 - 252
Less potential	$M - (1.5SD) - M - (0.5SD)$	149 - 200
Not potential	$< M - (1.5SD)$	< 148

RESULTS AND DISCUSSION

Development of a method in an effort to find the potential of athletes in the sport of martial arts, which is usually a psychological test carried out after participating in a training program for some times determined by the supervisor of the training implementing unit in the sport of martial arts, with this research psychological tests are also applied to novice athletes who will become new members in the training unit. The test components that have been agreed upon by the trainer and researcher can be seen in the following chart:

Table 3. Athlete Potential Psychological Test Results

Aspect	Percentage
Achievement	68%
Competitive	66%
Managing Control	62.9%
Self Efficacy	67.78%
Fear Failure Control	63.73%
Stress Managing	63.83%
Emotion	65.56%
Empathy	70.33%
Power	54.40%
Aggressiveness	67.73%

From the table above, it can be seen that the percentage level of each criterion of the 78 athletes who were tested the results were achievement components 68%, competitive 66%, managing pressure 62.9%, self-efficacy 67.78%, fear failure control 63.73%, stress management 63.83%, emotion 65.56%, empathy 70.33%, power 54.40%, and aggressiveness 67.73%. In order to fulfill athletes' level status in an elite position, then all of these components need to be repaired so that their achievements can increase to close to 100%.

Need for achievement is the desire to challenge difficult work, in which people who have a high need for achievement have control over their behavior and like difficult challenges, while people who have a low need for achievement are easily satisfied with little challenge (Andronikos et al., 2021). The results of other studies show that the need for achievement and professionalism in entrepreneurship has the highest consistency (Song, 2022).

The second component to consider is competitive, this is one thing related to competition. Competition is a condition of struggle or a state of competition carried out by individuals or groups in winning a competition. To win a competition, one needs to study the competitive advantages it has. The things that need to be prepared to get this skill are: ability to analyze the abilities and weaknesses of your opponent. Analysis of the ability of the opponent is very important because by doing this athletes can think of strategic steps that can be taken to win the competition. Having an unyielding attitude, hard work, and focus are also needed to get this skill. Hard work is needed so that athletes are able to compete in a healthy manner and focus is needed so that athletes do not deviate from their initial goal of competing. Recognize the potential that lies within us. If we have competitive skills, we will automatically be able to measure up to the extent of our own abilities.

The third component is about self control. This shows the importance of self-control in athletes deal with sudden negative actions, such as provocation by opponents. Athletes are expected to be able to deal with situations and conditions that occur during matches. The self-control needed by athletes is good self-control

so that they can achieve the desired goals (Cahyani & Siswati, 2020). Self-control is defined as the ability to arrange, guide, regulate, and direct forms of behavior that can lead to positive consequences. Self-control is one of the potentials that can be developed and used by individuals during the processes in life, including in dealing with conditions that exist in the surrounding environment. Some people, thanks to self-control, can manage much better than others in their paths in life. They can better deliver on promises and achieve better results at work. Better self-control skills could likely be associated with higher achievement in certain areas of activity (Dumciene & Sipaviciene, 2021).

Next component is self-efficacy. Self-efficacy can be interpreted as a matter of people's judgment of their ability to organize and carry out the actions necessary to achieve the type of performance expected (Gale et al., 2021). Self-efficacy can also be interpreted as an individual's belief about his own ability to carry out his duties or the actions needed to achieve certain results. Some researchers also stated that self-efficacy is one's judgment that influences how one deals with external situations (Marschall & Watson, 2022).

Stress can be defined as "a state of extreme stress or perceived homeostasis being threatened". Various external, true, or perceived stressful events (stress) mobilize the organism's "stress system" to rebuild the body's homeostasis through a series of behavioral and physiological adaptive response (Zisopoulou & Varvogli, 2023). The results of other studies convey that stress management as a skill that allows a person to anticipate, prevent, manage, and recover from stress that is felt due to threats and incompetence in something that is done. Stress management will make changes in a person's way of thinking and behaving. Stress management is also considered a skill in dealing with challenges by controlling responses proportionally. Stress management can also be considered as an attempt to prevent stress, increase the stress threshold of the individual and accommodate the physiological consequences of stress.

The next component included in the category is emotion. Emotions are the body's reaction to a certain situation. The nature and intensity of emotions are usually closely related to human cognitive (thinking) activity as a result of perception of the situation (Dzedzickis et al., 2020). It has long been known that emotions are one of the most influential aspects of human behavior. Together with two other aspects, namely cognitive (thinking power) and conative (psychomotor), emotion or what is often called the affective aspect, is a determinant of attitude, one of the predispositions of human behavior (Ruiz et al., 2021). Emotion has long been overlooked in strategic management research, which traditionally did not focus on who strategists are, what they do, and how they think and feel. Instead, research has typically focused on understanding the content of strategy and its relationship to organizational performance (Brundin et al., 2022).

The next component is the ability to empathize. Empathy should be owned by everyone, because this ability usually appears at elementary school age or around the age of six (Kukar, 2020). What distinguishes an individual's feelings of empathy from others is the level of depth of feeling and how to show these feelings of empathy. The importance of empathy can be seen in the health of one's interpersonal relationships, which can feel the feelings of others but can still maintain the integrity of one's own mind. So the person still has his/her own integrity and identity. Empathy is a social "bonding force" cognition, enabling individuals to share experiences and understand each other's perspectives (Depow et al., 2021). Empathy is more an understanding of other people than a diagnosis or evaluation. Empathy is a broad concept that refers to the cognitive and emotional reactions of individuals who observe other individuals' experiences. Having empathy can increase the desire to help others and develop compassion. Empathy is the key to the success of a relationship because it can help mutual understanding between the perspectives of each other's needs and intentions (Depow et al., 2021).

The next component is about aggression, one of which is the level of aggressiveness of an athlete is determined by the type of sport. Some experts explain that one of the determinants of an athletes' aggressive attitude depends on contact sports with opponents or non-contact (Bazli et al., 2021). Aggressive behavior is behavior that is carried out based on experience and the existence of certain situational stimuli that cause someone to take aggressive actions. This behavior can be carried out by design, immediately or because of situational stimuli. This aggressive action is usually an anti-social act that is not in accordance with customs, culture or religion in a society (Zhang et al., 2021).

Thus, from the 11 basic components used to determine potential athletes, from the 11 components, if presented to each athlete, it can be seen how much the athlete has potential in the combat sport, based on the simplification of the SPQ20 sports potential test by prioritizing 11 criteria. in the following table:

Table 4. Identification of Psychological Aspects of Potential Athletes

	Category	Qty	Percentage
Very potential	$> M + (1.5SD)$	0	0.00
Potential	$M + (0.5SD) - M + (1.5SD)$	21	26.95
Enough	$M - (0.5SD) - M + (0.5SD)$	29	36.73
Less potential	$M - (1.5SD) - M - (0.5SD)$	6	7.69
Not potential	$< M - (1.5SD)$	22	28.29
Total		78	99.66

From the trial, namely the initial screening of psychological tests was carried out using the SPQ 20 psychological test, it was found that 26.95% or 21 people were in the potential category, 36.73% or 29 people were quite potential, 7.69% or 6 people were in the less potential category. 28.29% or 22 people in the non-potential category. Diagrammatically the distribution of potential athletes' can be seen as follows:

Table 5. Percentage of Potential Athletes' Level Category in Tarung Derajat

Category Level	Percentage
Not Potential	0%
Less Potential	28.29%
Potential Enough	36.73%
Potential	26.95%
Very Potential	7.69%

Based on the psychological screening data, it will affect the way the training program is made so that scientifically the athletes' performance in competing for the combat sport branch can increase in performance to 100% after the physical conditions and techniques and tactics are also programmed during training, so that the process in preparing athletes sees their talents and traits. Natural basis based on psychology but in developing on a scientific basis and planned to get athletes in top performance. In order to prepare athletes for training, the coach must know the characteristics of these athletes, which include physiological, psychological and social characteristics. By knowing these characteristics, the implications can then be known.

Scouting talent in sports is an effort that is carried out systematically to identify someone who has potential in sports, so that it is estimated that someone will succeed in training and be able to achieve peak performance. The process of identifying talented athletes must be a concern for each sport, because the main purpose of conducting talent scouting is to identify and select potential athletes who have the highest abilities in certain sports. Talent scouting objectives are also used to predict with a high degree of probability whether an athlete will be able to and successfully complete a training program in the chosen sport in order to measure with certainty. By using an initial psychological test with simple criteria but not ruling out data on other psychological components of the character of athletes who have the potential to use a development model from psychological tests so that it will describe the character of the Tarung Derajat and the desired target athletes so that the athletes obtained can be fostered optimally so that become an elite athlete.

CONCLUSION

The research and data analysis conducted in this study resulted in the following conclusions: First, the athletes were classified as talented or potential athletes based on a psychological perspective. These categories include highly potential, potential, moderately potential, less potential, and not potential. Second, various psychological components were examined, such as achievement, competitiveness, pressure management, self-efficacy, controlling fear of failure, stress management, emotions, empathy, strength, and aggressiveness. Thirdly, among the athletes in the training centre, 50 athletes (64%) showed potential to be

psychologically gifted, while 28 athletes (40%) were found to be either not potential or not gifted. The highest psychological criterion indicating potential talent was empathy, with a score of 70.33%.

It is recommended to conduct further research on talent and potential among athletes, exploring other factors not addressed in this study. In addition, this study was limited to one sport, Tarung Derajat, in Central Java Province, and thus its generalisability is limited. However, this study has made a significant contribution to the ease of talent identification for coaches and trainers of the sport of Tarung Derajat through the use of psychological tests. For future research, it is recommended to administer psychological tests to athletes in different sports and compare the findings to determine similarities or differences. In summary, this study provides valuable insights into talent identification in sport, emphasising the importance of psychological factors. It highlights the need for a comprehensive assessment that considers various aspects of an athlete's potential and suggests further exploration of unexplored factors in future research.

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CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

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