

Psychological Characteristics of Athletes in Athletic Students Club Universitas Negeri Semarang

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Abstract— Sport psychology influences behavior in sport activities. Psychological characteristics will show how the real athletes are. This study will provide a clear picture of the psychological characteristics that affect the performance of athletes in Athletics Student Club and can be used as a strategy to improve athletic psychology skills. The data were collected from 24 athletes of Athletics Student Club Universitas Negeri Semarang. Its consist of Athletic athlete from running athlete, jumping athlete, and throwing athlete. Sample is athletes of sprint, long jump, high jump, middle distance, long distance, shot put, javelin throw, and discus throw. The data were completed with Psychological Skill Inventory for Sport (PSIS-IR 5) questionnaire. This Questionare include psychological factors namely motivation, confidence, anxiety control, mental preparation, and concentration. In order to describe the data, the description with SPSS Software. The results revealed that characteristic psychologies of athletes of athletics are high in motivation, and some of them are low in concentration.

Keywords— *Athletics, Characteristics, Sport Psychology.*

I. INTRODUCTION

Scope of sports includes the understanding about how psychological factors influence the performance and the sports' involvement toward psychological development, adaptation, and welfare [1]. Ali maksum in his book stated that one of the applied psychologies was about sport training and performance. The sport activities that can build the personality teach someone about discipline, sportmanship, perseverance, competitiveness, cooperation, and decisiveness [2].

Some studies have proven that psychological role works as performance determinant of athletes and builds athletes' personality. Weinberg and Gould explained that personality makes someone unique. In essence, personality refers to the characteristics – or blend of characteristics that make a person unique [3]. Psychological characteristics show how the real athletes are. Besides based on Brewer, 2009; Mirzaei, Nikbakhsh and Sharififar, the ability to prepare the mentality is recognized as the component of key difference [4].

Durand-Bush and Salmela mentioned that the characters of psychological characteristics are used by

the elite athletes to increase achievements, such as; self-confidence and motivation to become the most outstanding character. The approach to identify the psychological characteristics is gained from some psychological factors [4]. The approach is used to investigate the relation between psychological factors and performance examine the elite and non elite adult players. The underlying assumption of such approach is that teenagers who have characteristics can be identified as important success in adult sports. The success is about defending this attribute until the athletes become successful adult athlete. Morris has emphasized the argument by saying that the important characteristic for the success of adult performance can be used to identify the psychology of teenagers at early selection [5].

Generally, psychological factors that determines the achievement of athletes are motivation, mental preparation, self-confidence, anxiety control, team emphasis, and concentration. Davies and Armstrong in Nopiyanto & Dimiyati confirmed that important psychological factors and determines the success of the athletes are motivation, mental preparation, self-confidence, and concentration [6]. This theory also has been confirmed by Mahoney; Dossil 2006 by saying that potential and determinant psychological factors for performance are motivation, trust, anxiety control, mental preparation, attention, and concentration [7]. Dimiyati and Hastuti [8] in their article reported that some researches explained about several influential aspects to the performance, such as 1) Meyers, LeUnes, and Bourgeois reported that scores of elite rodeo athletes were higher than non-elite athletes in terms of motivation, anxiety control, and concentration, 2) the research of Cox, Liu, and Qiu, toward elite athletes in China found that elite athletes had higher level scores in terms of self-confidence and anxiety control. 3) There are some necessary and influential psychological aspects to the sport martial art (pencak silat, taekwondo, etc), such as: concentration, anticipation, control, emotion, self-confidence, and struggle [7] and [8].

Some researches stated that there were differences related to the psychological characteristics of athletes either they were from individual or group sports.

Singer, et all [9] and Raharjo, et all [10] also stated that the team sport has the difference characteristics between individual sport. These differences are considered that individual sport high significant score on conscientiousness and autonomy than team sport. For the team sport have the high significant score on agreeableness. The others study of Dimiyati and Hastuti in their research confirmed that generally there were no significant differences between the psychological characteristics of group and individual sports. However, there were significant differences in the individual sports, such as: motivation, self-confidence, and team emphasis between archery and pencak silat. The fundamental differences about the characteristics of each sport allows the differences of athletes' psychological characteristics to happen [8].

According to the influential psychological aspects to the athletes' performance either during competition or training, the main purpose of this study is to check the psychological characteristics of athletes in Athletic Student Club of Universitas Negeri Semarang. This student activity has contributed to the achievements of those athletes. Athletic sports will have certain event numbers. Those numbers will be used to know the characteristics of each of them either the number of running, javelin throw, and jumping. There are 6 psychological factors based on questionnaire, such as: Anxiety Control; Confidence; Motivation; Concentration; Team Emphasis; Mental Preparation.

II. MATERIALS AND METHODS

The research method is survey with descriptive qualitative approach. This is used to give detailed information by identifying some factors related to athletes' characteristics in some event number of Athletic Student Club of Universitas Negeri Semarang. Subjects research that become samples are 24 athletes that consist of 17 running athletes, 3 athletes of jumping, and 4 athletes of throwing.

Instrument of this research is Psychological Skill Inventory For Sport (PSIS-IR5) by Mahoney [11], and it has been adopted and developed in Deutch. It became (PSIS-Youth Cro) [12]. It includes 43 questions / points Likert type items, distributed over the same 5 scales as the PSIS-R-5; Anxiety Control (8 items), Mental Preparation (6 items), Motivation (7 items), Team Emphasis (6 Items), Team Emphasis (6 items), Concentration (7 items), and Confidence (8 items). This instrument has been tested with high score of reliability around 0,8 up to 0,9 using Cronbach's Alpha calculation.

The research steps are: 1) translating the instruments from English into Bahasa one, 2) validation process of instrument that will be used by the experts in Sport Psychology, 3) data retrieval, 4) data analysis, 5) data synthesis to be used as coach reference and suggestion how this psychological characteristics are affected to the athletes' performance.

To analyze the data, statistic descriptive analysis is used to describe the psychological characteristics of the athletes. The measurement is done by distribution

into 5 Five-point likert scale. The following formula is used to find the percentage is:

$$P = \frac{F}{N} \times 100\%$$

Information : P = Percentage Result
 F = Getting score From the Athlete
 N= Responden Amount

III. RESULTS AND DISCUSSIONS

The result of descriptive analysis in the from of N (respondent amount) will be explained further in the following table. The results are counted based on th percentage. According to the calculation result using the formula above and the category or criteria of athletes' psychological characteristics are:

Table I. Criteria Anxiety Control Factor

Percentage Interval	Total	Percentage
80% - 100 %	Very High	16,67%
60% - 79,99 %	High	54,17%
40% - 59,99 %	Medium	20,83%
20% - 39,99%	Low	8,33%
0% - 19,99%	Very Low	0,00%

Based on the data in table I, it can be inferred and analysed that athletes of Athletic Students Club have good psychlogical aspects in term of anxiety control with percentage result 16,67% very high, 54,17% high, 20,83% medium, and the rest 8,33% with low category.

Table II. Criteria of Mental Preparation Factor

Percentage Interval	Total	Percentage
80% - 100 %	Very High	29,17 %
60% - 79,99 %	High	62,50%
40% - 59,99 %	Medium	8,33%
20% - 39,99%	Low	0,00%
0% - 19,99%	Very Low	0,00%

On the table II, it can be inferred that the aspect of Mental preparation has very high category with the percentage 29,17%, 52,50% in high category, and 8,33% medium category.

Table III. Criteria of Motivation Factor

Percentage Interval	Total	Percentage
80% - 100 %	Very High	91,67%
60% - 79,99 %	High	8,33%
40% - 59,99 %	Medium	0,00
20% - 39,99%	Low	0,00
0% - 19,99%	Very Low	0,00

Based on the tabel III, It is different enough in the aspect of motivation, almost Athletes of Athletic Student Club have very good motivation with the percentage 91,67% or very good category and the rest just have 8,33% or high category.

Table IV. Criteria of Team Emphasize Factor

Percentage Interval	Total	Percentage
80% - 100 %	Very High	29,17%
60% - 79,99 %	High	54,17%
40% - 59,99 %	Medium	16,67%
20% - 39,99%	Low	0,00
0% - 19,99%	Very Low	0,00

For the Team Emphasis factors on table IV, it can be inferred that more than a half team or 54,17% for high category, 29,17% or very high category, and 16,67% for medium category.

Table V. Criteria of Concentration Factor

Percentage Interval	Total	Percentage
80% - 100 %	Very High	0,00
60% - 79,99 %	High	62,50%
40% - 59,99 %	Medium	37,50%
20% - 39,99%	Low	0,00
0% - 19,99%	Very Low	0,00

In table V or the concentration aspect, there is no athlete with high concentration level and the percentage is divided into two categories, 62,50% or high category and 37,50% or medium category.

Table VI. Criteria of Confidence Factor

Percentage Interval	Total	Percentage
80% - 100 %	Very High	20,83%
60% - 79,99 %	High	75,00
40% - 59,99 %	Medium	4,17
20% - 39,99%	Low	0,00
0% - 19,99%	Very Low	0,00

Table VI contains it is known that confidence aspect that shows 20,83% or have very high category, 75% or high category, and the rest is 4,17% or low category.

The grouping results for psychological factors of Athletes in Athletics Student Club Universitas Negeri Semarang based on Event Number of unning, Jumping and Throwing.

Table VII. Psychological Factors of Anxiety Control based on Grouping of Athletes' Event Numbers

Categories	Event Numbers					
	N	Running	N	Jumping	N	Throwing
Very High	3	17,65%	0	0,00	1	25
High	8	47,06%	2	66,67%	3	75
Medium	4	23,53%	1	33,33%		0
Low	2	11,76%	0	0,00		0
Very Low	0	0,00	0	0,00		0

Based on the table above, there are 17 athletes who are divided into 3 athletes who had very high anxiety control with the percentage 17,65%, 8 athletes had high anxiety control with the 47,06% in high category, 4 athletes had medium anxiety control with the 23,53% in medium category, and 11,76% of 2 athletes have low category anxiety control. Jumping athletes consist of 3 athletes, 66,67% or 2 athletes have high level of anxiety control and 33,33% or 1 athlete has medium level of anxiety control. Throwing athletes that consist of 4 athletes are divided into 1 athlete with 25% of anxiety control, and 3 athletes with 75% of anxiety control.

Table VIII. Psychological Factors of Athletes' Mental Preparation Based on Grouping of Athletes' Event Numbers

Categories	Event Numbers					
	N	Running	N	Jumping	N	Throwing
Very High	4	23,53%	1	33,33%	2	50%
High	11	64,71%	3	66,67%	2	50%
Medium	2	11,76%		0,00		0
Low	0	0,00		0,00		0
Very Low	0	0,00		0,00		0

Based on the table VIII, from 17 running athletes, there were 4 athletes that have very high level of mental preparation with the percentage 23,53%, 11 athletes have high level of mental preparation or 64,71%, and 2 athletes have medium level of mental preparation. The data should be for the jumping athletes that consist of 3 athletes are divided into 1 athlete had very high category with 33,33%, and the remaining 2 athletes have a high category in mental preparation with the percentage 66,67%. Furthermore in the throwing athlete consisting of 4 athletes shown the result is as many as 50% had very high and 50% in high category on mental preparation

Table IX. Psychological Factors of Mental Preparation based on Athletes' Event Numbers.

Categories	Event Numbers					
	N	Run	N	Jumping	N	Throwing
Very High	15	88,24%	3	100 %	4	100 %
High	2	11,76%		0,00		0,00
Medium		0,00		0,00		0,00
Low		0,00		0,00		0,00
Very Low		0,00		0,00		0,00

In the table IX, there were 17 running athletes are divided into 15 athletes with very high level of motivation or 88,24%, and 2 athletes with high level of motivation or 11,76%. All of jumping athletes that consist of 3 athletes and the result is 100% athletes have a very high category in motivation. All of throwing athletes that consist of 4 athletes have very high motivation category with percentage 100%.

Table X. Psychological Factors of Athletes' Team Emphasis based on Athletes' Event Numbers

Categories	Event Numbers					
	N	Run	N	Jump	N	Throw
Very High	5	29,41%		0,00	2	50%
High	9	52,94%	2	66,67%	2	50%
Medium	4	23,53%	1	33,33%		0
Low		0,00		0,00		0
Very Low		0,00		0,00		0

Based on the table X, it shown that 17 running athletes are divided into 5 athletes that have very high level of team emphasis with 29,41%, 9 athletes that have high level of team emphasis with 52,94%, and 4 athletes that have medium level of team emphasis with 66,67% or 2 athletes that have high level of team emphasis with 33,33% or 1 athlete that has medium level of team emphasis. 4 throwing athletes are divided into 50% of athletes that have very high level of team emphasis and 50% of athletes that have high level of team emphasis.

Table XI. Concentration Level of Athletes based on Athletes' Event Numbers

Categories	Event Numbers					
	N	Running	N	Jumping	N	Throwing
Very High		0,00		0,00		0,00
High	11	64,71%	1	33,33%	3	75,00%
Medium	6	35,29%	2	66,67%	1	25,00%
Low		0,00		0,00		0,00
Very Low		0,00		0,00		0,00

From the table XI, it is the concentration factors, as much as 17 running athletes consist of 11 athletes that have high level of concentration or 64,71%, and 6 athletes that have medium level of concentration or 35,29%. 3 jumping athletes consist of 1 athletes or 33,33% with high level of concentration and 2 athletes or 66,67% with medium level of concentration. 4 throwing athletes consist of 75% with high level of concentration and 25% with medium level of concentration.

Table XII. Confidence Level of Athletes based on Athletes' Event Numbers

Categories	Event Numbers					
	N	Running	N	Jumping	N	Throwing
Very High	3	17,65%		0,00	2	50%
High	13	76,47%	1	100,00%	2	50%
Medium	1	5,88%		0,00		0,00
Low		0,00		0,00		0,00
Very Low		0,00		0,00		0,00

Based on the table above for the confidence factors, there were running athlete it consisting of 17 athletes, there were 3 athletes who had very high category of self-confidence with the 17,65% and, 13 athletes with the percentage 76,47% had high category and remaining 1 athlete had a medium category with 5,88%. 3 jumping athletes consist of 100% of athletes with high level of concentration. 4 throwing athletes consist of 50% of athletes with very high level of concentration and other 50% medium level of concentration.

A. Description about Athletes Psychological Characteristics of Athletics Student Club in Universitas Negeri Semarang

Based on the result of data analysis to psychological analysis that become research variable, it is concluded that motivation factor is more dominant to the athletes of Athletic Student Club. The result shows that more than 91% of athletes have very high level of the category. It is good for athletes to have successful result when the athletes have good motivation.

There are other factors that have high categories around more than 50% of percentage, such as: Confidence, Mental Preparation, Concentration, Team Emphasis and Anxiety Control aspects. Only some aspects of those several aspects that can reach 20 up to 29% as high level of categories. Moreover, there are no athletes that have very high level of concentration.

This discussion is interesting enough because very high level of motivation does not give good impact to the other psychological impacts. For example, the athletes must have the concentration aspect. Athletic really need concentration. For example, athletes of running need concentration at the starting point and, jumping or throwing athletes also need concentration before starting to move. All athletic event number have step of preparation since the lost of concentration will cause less maximum movement. For example, running athletes that do not have good concentration will be late in first step when they start. As a result, the first move

will be left behind in some seconds from other running athletes and it is really disadvantageous for the athletes. Dossil also stated that:

“ Attention and Concentration in Athletics Concentration is an important variable in every period of the athletics season : to achieve established objectives in training; to combine the attentional demand of training and competition in the minor competition phase”. [7]

In his book, Dossil also highlighted that psychological characteristics must be emphasized to those running sports either sprint, middle distance, marathon or hurdle. One of the necessary emphasis taht must be applied is about continous concentration:

“100m and 110m hurdles As with the sprint events, getting a good start is essential. Therefore, we can apply the characteristics described for the 100m and 200m events are applicable here. These disciplines require continuous concentration, since although it is permitted to knock over hurdles, the time and technique lost can affect the result and the athlete's self-confidence”.[7]

Besides concentrationa and motivation, other psychological factors of the athletes also need to be emphasized, although several athletes show very high and level of category buat other athletes still have medium level of anxiety control and confidence.

B. Description about Athletes' Pyschological Characteristics of Athletics Student Club based on Athletes' Event Numbers

The research results based on grouping of event numbers involve 3 different athletics, such as: running, jumping, and throwing. The result of each event number and each psychological aspect is various and it can be adapted based on the number of athletes in Athletic Student Club that are not the same and they do not have high amount.

The most dominant factor for running athletes is motivation factor as the percentage is around 88,24% with high level of category. Then, the confidence also shows high level of category and it indicates that running athletes have high level of motivation.

The most dominant factors for jumping athletes are psychological aspects of confidence, anxiety control, team emphasis, mental preparation, and concentration with the same level of categories. So that the characteristics psychology of jumper Athlete is high motivation.

The most dominant factor for throwing athletes are high level motivation and anxiety control. It is not equally dominant for other aspects. So that it can be categorized the characteristics psychology of athletics in throwing event number is high motivation. Dossil 2006, it is stated that motivation is the most important psychological variable.

“Since athletics is a sport in which consistency and repetitive training sessions are fundamental for success, motivation is a key variable which should always figure in psychologists’ work. They should be especially on the look-out for this variable during the preparation phase when athletes confront their toughest training sessions (greater work loads). The importance given to this variable may diminish as the season goes by. As the athlete enters the competitive phase, the competitions themselves have a motivational effect (the higher the level of competition, the greater the motivation)”. [7]

The statement above explains that motivation the foundation of success or motivation is the psychological factors that must be emphasized even during training or before the competition. Therefore, the motivation in the competition step will increase and it can bring positive impact in other psychological factors.

IV. CONCLUSIONS

The main purpose of this study is to describe the psychological characteristics of athletes in Athletic Student Club Universitas Negeri Semarang. Other psychological factors in the research are not fully working in some athletes from Athletics Student Club in Universitas Negeri Semarang. When the most important factor in athletic is that motivation has been fulfilled, then other factors need training to increase the performance of the athletes later.

Every Athlete is different individual with the different characteristics, but the characteristic can be determined by ages, environment, or activities of the athlete. When the athletes of certain athletic has certain psychological factor, it will become the characteristic of that athlete.

This research describe of characteristics of some factors are still in the categories of medium level. It needs further study to increase the psychological factor that will become the development of this topic. Some other studies that are recommended, such as: (1) The study of other psychological characteristics from different clubs with various samples and equal amount so that it can show the most dominant characteristic especially in Athletic. (1) Training of psychological skill can be applied for the athletes to increase the performance either in training or competition.

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