

## **The Effect of Achievement Motivation and Competence on Athlete Achievement at the North Sumatra Student Sports Education and Training Center (PPLP)**

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### **ABSTRACT**

This study aims to analyze the motivation for achievement and competition for the achievement of athletes at the North Sumatra Student Sports Education and Training Center (PPLP). Where there are athletes' achievements. There are two independent variables, namely the number of athletes and the number of competitions. This study uses secondary data by conducting a data search through the North Sumatra Student Sports Education and Training Center (PPLP). The data analysis model in this study uses multiple linear regression. The results of the study showed that the variables of the number of athletes and the number of competitions had a significant effect on the achievement of athletes at the North Sumatra Student Sports Education and Training Center (PPLP).

### ***Keywords:***

Athlete Achievements, Number of Athletes, Number of Competitions

### **1. Introduction**

The achievements of PPLP athletes (at the Center for Student Sports Education and Training) refer to the achievements of athletes who are part of the PPLP program. These achievements can include success in regional, national, or international competitions, as well as personal achievements and improvements in their respective sports. The achievements of PPLP athletes can vary depending on the type of sport and the level of competition. Athletes in PPLP programs often receive specialized training, mentorship, and support to help them reach their full potential in their chosen sport. To find information about the specific achievements of athletes from a particular PPLP program, you may need to refer to an official sports organization, the governing body, or directly to

the PPLP itself. They often provide updates and announcements regarding their athletes' achievements in various competitions.

In the economic aspect, Athlete Achievement greatly determines how the prospects for economic development, both in the aspect of developing the younger generation and in improving the standard of living of the athlete or the athlete's family. In this case, Athlete Achievement is very influential in the Youth Development Index itself where the 5 domains in the IPP (Youth Development Index), namely education, health, employment, participation, and gender can be balanced because many are obtained (including 5 domains) if they achieve.

Along with the development of the sports coaching system that gave birth to PPLP, the Deputy for Sports Achievement Improvement of the Ministry of Youth and Sports of the Republic of Indonesia through the Assistant Deputy for Sports Nursery provided an operational outline of PPLP within the framework of the National Sports Nursery System as the peak of achievement development at the sports nursery level. In its management, ideally PPLP has an organizational structure. This structure involves elements of local government, in this case the Education Office/agency in charge of Sports, Provincial KONI, and Provincial Management of Sports Branches. Thus, in the process of implementation, the elements involved in the organizational structure can carry out their duties and responsibilities in accordance with the functions of their respective organizations.

The local government through the Education Office/agency in charge of sports as one of the leading sectors of the central government, in this case the Ministry of Youth and Sports of the Republic of Indonesia, coordinates with the Provincial KONI as an element of the sports community which is also the coach of the Provincial Management of the sports branch. The function of the Provincial KONI is as a coach for gyms, clubs, dojangs, sports colleges which are basic elements or as a source of nurturing potential outstanding athletes (Muskanan, 2015)

Character formation can be done one of them through sports, with sports we can develop the nation's character, sportsmanship as well as glue the unity of the nation. On this basis, all components of the nation must contribute to advancing national sports. In the context of sports, student athletes who foster the North Sumatra Student Training Education Center (PPLP), in addition to the sports talent developed in the students at PPLP, also instills a character that can lead the student to the champion. What is the strength in its implementation is that automatically students who become athletes will be



in the dormitory so that the dormitory head and coach will pay more attention to their development and growth based on that, will make it easier to control and supervise the behavior of their students and will minimize the bad influence of the surrounding environment. The weakness in the student-athlete environment is that too often the practice of student learning hours at school is disturbed, so that in the implementation of learning at school students become not optimal due to the tiredness of the activities they do every day, it is feared that it can make children bored to learn and even make it difficult for children to grasp formal lessons.(Karo, 2019)

## **2. Theoretical Foundations**

### **a. Athlete Achievements**

Achievement is very different from success (Kriegstein, 2018). Kriegstein continued (2018) that philosophically, the meaning of achievement lies in the ability of individuals to achieve success. That is, implicitly, the meaning of achievement lies in the word ability itself, and success or success is simply the impact of achievement rather than individual ability. In addition, Eccles' expectancy-value theory (EVT) defines achievement as an individual's motivation to achieve what he wants (Eccles, 2009). Based on this explanation, it can be said that if Eccles puts achievement as the expectation of the individual's motive for success, then implicitly it is slightly different from Nicholls who puts achievement as an individual process showing his ability to achieve what he aspires to be success itself. Adam Smith in the classical economic school (1729-1790), proposed that wealth in a country will increase according to the skills of labor used. The main source of income is the production of labor and economic resources. And effective allocation of human resources is the initiator of economic growth. After the economy grows, the accumulation of capital (physical) is only needed to keep the economy growing.

Receiving an individual or team award, such as "Athlete of the Year" or similar awards, is a form of recognition for sporting achievement. Involvement in prestigious sporting events, such as the Olympics, World Cup, or world championships, can be considered a high-level achievement. Sports achievements can also include personal achievements of athletes, such as improving travel time, achieving training goals, or overcoming injuries. Maintaining consistently high performance or demonstrating endurance throughout a particular season or period of time may be considered sporting achievements. The positive influence produced by an athlete or team in society can be considered a sporting achievement. This includes being an inspiration to others or getting



involved in charitable activities. Sports achievements can be the result of a combination of natural talent, dedication, hard training, team support, and other factors. Success in sports often involves collective efforts and contributions from various parties.

## **b. Athlete**

Athletes are people who are trained in strength, agility and speed to participate in the competition (Hoffman, 2010). Based on the Great Dictionary of the Indonesian Language (Basuki, 2002) an athlete is a subject or someone who has the potential or pursues a certain sport and achieves in that sport. According to Putri Ika (2007) an athlete is expected to have a healthy, strong and intelligent body. This expectation will be achieved if a club can implement sufficient physical training, both in terms of quantity and quality. Physical training must not only be routine, but also varied and fun, not only the physical side is influential, but also the psychological factor of the player. This proves the existence of a psychological-physical reciprocal relationship. If the psychological aspect is disturbed, physical function is also disturbed, which will then interfere with motor skills. The athlete must have a stable psyche, which means that the athlete must be able to overcome all the non-technical pressures that come to him. This is aimed at achieving the highest achievements. (MAYAMAN, 2019)

Athletes are known for their skills and excellence in various aspects of the sport, including technique, speed, strength, and endurance. Athletes spend significant time training and improving their sports skills. Dedication to training is an integral part of an athlete's life. Athletes participate in a variety of sports competitions, ranging from local to international levels. They compete to achieve personal achievements or as part of a team. Athletes need to have high mental and physical endurance. They must be able to cope with the pressure of competition, overcome injuries, and stay focused on their goals.

An athlete can be a professional who earns an income from his participation in sports, or as an amateur who participates because of his love for sports without financial rewards. Athletes are often role models and a source of inspiration for sports fans and the general public. They can make a positive contribution to their community through their achievements and behavior on and off the field. It is important to note that the definition of an athlete can vary depending on the type of sport and level of participation. An athlete can span a wide range of levels, from local amateurs to internationally renowned



professional athletes.

### **c. Competition**

The competition is part of the social process between two or more parties who compete with each other to do something to achieve victory. Competition occurs when there are several parties who want something in limited quantities. Moreover Competition is defined as a relationship between two or more living beings who compete with each other for something necessary in life. If competition is viewed in terms of Natural Sciences, it can be interpreted as a symbiosis that makes interactions between individuals who compete for a limited number of resources. In the symbiosis of competition, it is usually the stronger organism that will win the natural resources. Meanwhile, weaker organisms are forced to look for other resources by migrating. Competition or competition functions as a means of procurement of social selection. If the competition that occurs between parties can be realized with healthy thoughts, the competition that occurs will act as a selection tool between individuals and groups that have better quality. (WWN, 2022)

Lutan and Sumardianto (2000: 7) argue that sport itself is essentially neutral, but it is society that then shapes its activities and gives meaning to those activities and uses them for certain purposes. To be able to develop an understanding of sports in society, without including attention to the topic of competition is difficult, because according to one of the definitions, sports are actually competitions and sports are sometimes said to be the embodiment of the path of competition in life. Humans sometimes forget that competition comes in various forms and types of relationships and there are also various variations in the level of competition that are conditioned according to the interest and attention to the competition. Various levels of competition have been integrated in sports with various forms of consequences. Luschen said that it is important to be able to understand that competition can be seen both as an interpersonal relationship and as an individual's motivation and orientation.

Sports competitions can take place at a local, national, or international level, and can involve different levels of expertise, from amateurs to professionals. The competitive aspect of sports provides an exciting and in-depth dynamic, capturing the attention of fans and promoting the spirit of the sport.

## **3. Method**



### a. SWOT Models

It is an acronym or abbreviation of four words , *namely strengths, weaknesses, opportunities and threats*. This analysis is one of the methods used to evaluate the strengths, weaknesses, opportunities, and threats in business speculation. This analysis provides an output of direction rather than a solution to a problem.

SWOT analysis is an instrument that identifies various factors that are formed systematically that are used to formulate a company's strategy. This analytical approach is based on logic that can maximize strengths and opportunities while minimizing weaknesses and threats.

In short, SWOT analysis can be applied by analyzing and sorting out things that affect the four factors. Thus, the results of the analysis can form strategic planning based on the results of the analysis of the company's strategic factors. The SWOT matrix includes:

- 1) Strengths
- 2) Weaknesses
- 3) Opportunities
- 4) Threats.

### b. Multiple Linear Regression

Multiple linear regression is a measuring tool used to measure the existence or absence of correlation between several variables, with the form of the regression equation as follows:(Rusiadi, 2015 )

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where:

Y = Athlete Achievement

a = Price Y when  $X_1$  and  $X_2 = 0$  (constant price)

$\beta$  = Regression coefficient

$X_1$  = Athlete

$X_2$  = Competition

$\varepsilon$  = Error Term

## 4. Results and Discussion

### a) Overview of North Sumatra PPLP

The North Sumatra Student Education and Training Center (PPLP) is one of the





institutions in Indonesia that aims to develop sports talents and potential for students in North Sumatra. This PPLP is under the auspices of the Ministry of Youth and Sports (Kemenpora) and is supported by the local government. PPLP North Sumatra focuses on coaching young athletes who have great potential to develop in various sports. This program is aimed at preparing young athletes to compete at the national and international levels. PPLP North Sumatra provides formal education as well as intensive sports training. The students who are selected to participate in this program are usually those who have shown achievements at the regional and national levels.

PPLP North Sumatra is equipped with various sports facilities such as fields, gyms, and other supporting facilities. The training program provided covers various aspects ranging from technical, physical, to mental. PPLP North Sumatra has produced many athletes who have excelled both at the national and international levels. They often participate in competitions such as the National Sports Week (PON), international championships, and others. Cooperation and Support: Apart from the government, PPLP North Sumatra also often receives support from various institutions and organizations, including sponsors, to help improve the quality of coaching and facilities. With the existence of PPLP North Sumatra, it is hoped that North Sumatra can continue to produce outstanding athletes who can make the region and country proud in the sports arena.

## **b) SWOT Analysis**

The results of the SWOT analysis to formulate a strategy to improve welfare in Sei Suka District, Batu Bara Regency. It can be explained as follows:

<b>Internal Strategy Factors</b>
<b>STRENGTHS</b>
<ul style="list-style-type: none"><li>➤ PPLP has experienced and trained trainers and coaches.</li><li>➤ It has complete and modern training facilities that support various training activities.</li><li>➤ Receive sufficient funding support from the government or related institutions.</li><li>➤ PPLP is known to have a good reputation in producing competent graduates.</li><li>➤ Having a wide network with various agencies and companies, making it easier to place graduates.</li></ul>
<b>WEAKNESSES</b>

- Capacity to accommodate trainees may be limited, so not all interested parties can be accepted.
- The training curriculum may not always be updated according to the latest industry and technological developments.
- There may be a lack of variety of training programs offered, so it cannot meet all the needs of participants.
- High operational costs can be a burden on program sustainability.

External Factors	
OPPORTUNITIES	
<ul style="list-style-type: none"> <li>➤ The high demand for skilled and trained workers opens up great opportunities for PPLP.</li> <li>➤ Opportunities to forge partnerships with industry for internship programs, training, and job placements.</li> <li>➤ The adoption of new technologies in the learning and training process can increase the effectiveness of the program.</li> <li>➤ Opportunities to get funding from external sources such as donor agencies or international cooperation.</li> <li>➤ Increasing public awareness of the importance of education and training can attract more participants.</li> </ul>	
THREATS	
<ul style="list-style-type: none"> <li>➤ Competition with other training programs that may offer more attractive facilities and curriculum.</li> <li>➤ Changes in government policies that support education and training can affect PPLP funding and operations.</li> <li>➤ Rapid technological advancements may make the existing curriculum obsolete in a short period of time.</li> <li>➤ Economic instability can affect the number of participants who can afford the training fee.</li> <li>➤ Pandemics or other health crises can disrupt the in-person training process and affect the sustainability of the program.</li> </ul>	

## Multiple Linear Regression

### a) Multiple Linear Regression Coefficients<sup>a</sup>

Type	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF





		Error				nce	
(Constant)	6.577	.567		8.522	.000		
Number of Athletes	.061	.046	.421	6.133	.000	.978	1.002
Number of Competitions	.076	.052	.323	4.567	.009	.998	1.012

Source : SPSS Version 23.0 Processing Results

Based on the table above, multiple linear regressions are obtained as follows:  $Y = 6.577 + 0.61X_1 + 0.076X_2 + \epsilon$ .

The interpretation of the multiple linear regression equation is:

- 1) If everything in the independent variables is considered to be fixed, then the Athlete's Achievement is 6,577.
- 2) If the number of athletes increases, then the Athlete Achievement will increase by 0.061 per unit of value.
- 3) If the Number of Competitions increases, then the Athlete Achievement will increase by 0.076 per unit of value.

#### b) Test Goodness Of fit

##### 1) -t Test (Partial Hypothesis Test)

Test Table -t (Partial Hypothesis Test) Coefficients<sup>a</sup>

Type	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
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Number of Competitions	.076	.052	.323	4.567	.009	.998	1.012

Based on the table above, it can be seen that:pa

a) The Effect of the Number of Athletes on Athlete Achievement.

Tcalculated 6.133 > ttable 1.652 and significant 0.000 < 0.05, then Ha was accepted, which states that the Number of Athletes has a significant effect on Athlete Achievement.

b) The Effect of the Number of Competitions on Athlete Achievement

tcalculated 4.567 > ttable 1.652 and significant 0.009 < 0.05, then Ha Accepted, which states that the Number of Competitions has a significant effect on Athlete Achievement.

## 2) Test – F (Simultaneous Hypothesis Test)

The F test (simultaneous test) was carried out to see the influence of the independent variable on the bound variable simultaneously. The method used is to look at *the level of significant* (=0.05). If the significance value is less than 0.05 then H0 is rejected and Ha is accepted.

**Test Table – F (Simultaneous Hypothesis Test) ANOVA<sup>a</sup>**

Type	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	29.119	5	9.171	30.777	.000b
Residual	29.603	122	.311		
Total	64.777	125			

a. Dependent Variable: Athlete Achievement

b. Predictors: (Constant), Number of Athletes, Number of Competitions

Source : SPSS Version 23.0 Processing Results

Based on the table above, it can be seen that Fis calculated as 29.119 > Ftable is 2.65 and significantly smaller than 0.05, which is 0.000 < 0.05, then

the Ha received the Number of Athletes, the Number of Competitions simultaneously has a significant effect on the Achievement of North Sumatra PPLP Athletes.

### 3) Coefficient of Determination (R<sup>2</sup>)

This determination coefficient analysis is used to determine the percentage of variation in the influence of the independent variable on the bound variable

**Determination Coefficient Table (R<sup>2</sup>) Model Summary<sup>b</sup>**

Type	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.666a	.444	.699	.62077	1.874

a. Predictors: (Constant), Number of Athletes, Number of Competitions

b. Dependent Variable: Athlete Achievement

Source : SPSS Version 23.0 Processing Results

Based on the table above, it can be seen that the *adjusted R Square* figure of 0.699 which can be called the determination coefficient which in this case means 69% of the city of Medan, can be obtained and explained by the number of athletes, the number of competitions. While the remaining 31% were explained by other factors or variables outside the model that were not studied.

### c) Discussion

From the test results, it can be seen that all independent variables have a positive influence on the bound variable (Athlete Achievement). The detailed results of the analysis and testing can be explained as follows:

### **1) The Effect of the Number of Athletes on Athlete Achievement**

Based on the partial hypothesis test carried out, a calculated t-value of 6.133 > t-table 1.652 and a significant  $0.000 < 0.05$  were obtained, then  $H_a$  was accepted, which stated that the number of athletes had a significant effect on the Athlete Achievement in PPLP North Sumatra. In addition, it also has a beta coefficient of 0.061, which means that the number of athletes increases, then the Athlete Achievement will increase by 0.061 percent. Thus, it can be concluded that the number of athletes has a positive and significant effect on the Athlete Achievement in PPLP North Sumatra. With a larger number of athletes, internal competition has become tighter. Athletes will be motivated to work harder and improve their performance to earn a top spot in the team or program. Healthy competition can improve the quality of training and performance, so that athletes are better prepared to compete at a higher level. A large number of athletes can increase social and moral support among fellow athletes. The support of teammates can be an important factor in maintaining enthusiasm and motivation. Athletes who feel supported by their teammates tend to have higher levels of motivation and greater fighting power.

Overall, a larger number of athletes in a team or training program can have a positive and significant influence on athlete achievement if managed properly. Internal competition, social support, variety of exercises, and adequate facilities are some of the factors that contribute to increased performance. However, it is important to address any challenges that may arise to ensure that each athlete gets the maximum benefit from the training program.

### **2) The Effect of the Number of Competitions on Athlete Achievement**

Based on the partial hypothesis test carried out, a calculated t value of 4.567 > table 1.652 and a significant  $0.009 < 0.05$ , then  $H_a$  was accepted, which stated that the Number of Competitions had a significant effect on Athlete Achievement. In addition, it also has a beta coefficient of 0.076, which means that if the Number of Competitions increases, then the Athlete's Achievement will increase by 0.076 percent. Thus, it can be concluded that the Number of Competitions has a positive and significant effect on the Athlete Achievement in PPLP North Sumatra. By participating in more competitions, athletes gain



richer competitive experience. This helps them understand the dynamics of competition, manage pressure, and develop effective strategies. This experience is invaluable and contributes to improving the performance of athletes in the next competition. They learn to stay calm and focused under pressure. The ability to manage stress and maintain focus is key to achieving high achievement.

The number of competitions that athletes participate in has a positive and significant influence on their performance, as long as it is managed properly. Competing experience, mental and physical development, performance evaluation, and motivation are some of the key factors that contribute to improved performance. However, it is also important to address challenges such as burnout and high costs through effective planning and adequate support. With the right approach, participation in competitions quite often can help athletes reach the peak of their performance.

## 5. Conclusion

From the results of the research on factors that affect the Improvement of Athlete Achievement at the Student Sports Education and Training Center (PPLP) of North Sumatra. Several conclusions can be expressed as follows:

1. The results of Partial Multiple Linear Regression show that the Number of Athletes and the Number of Competitions have a significant effect on the Achievement of Athletes at the Student Sports Education and Training Center (PPLP) of North Sumatra
2. Results of Simultaneous Multiple Linear Regression, Based on the above research, the number of athletes and the number of competitors simultaneously (Simultaneous) have a significant effect on the Achievement of Athletes at the North Sumatra Student Sports Education and Training Center (PPLP).

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