

## **FACTORS AFFECTING ATHLETE ABILITY OF THAI YOUTH ATHLETES**

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#### **Abstract**

The purpose of this research is to study the factors influencing Thai youth athlete ability. This research was a quantitative research. The population was young athletes who have participated in national sporting events. The sample was computed using 20 times greater than the number of the observed variables. A total of 340 young athletes were collected using simple random sampling. The instrumental data collection was a questionnaire created according to the guidelines found in the literature and adapted to the local context. Descriptive statistics were used to analyze the data and structural equation model analysis was used to test hypotheses. The results showed that athlete training, self-development, coaching athlete, and motivation for athlete influenced athlete ability, explaining 94 percent of the variance.

#### **INTRODUCTION**

Sport is a physical education activity that helps to develop people who do physical education activities, especially young people, for growing and having a good shape, good health and good physical fitness. It also helps to prevent diseases such as neurosis, imbalance, and deterioration of the coronary arteries, high blood pressure, obesity, diabetes, and degenerative joint disease, including the treatment and rehabilitation of various diseases effectively. Physical education activities, in addition to focusing on physical fitness, emphasize the use of experience, troubleshooting and good access to life as well as other people (Sports Authority of Thailand, 2560). This is because athletes have learned to be polite, disciplined, generous, empathetic and fair, including having sportsmanship, and patience, which arises from experience while take part in the sporting activity. It is a learning that actually happens and will stay in the body for a long time. At present, the majorities of people are interested in sports and exercise more prevalent. Furthermore, the government recognizes the importance of sports that affects public health. Therefore, there is support from the government sector and the 4<sup>th</sup> National Sports Development Plan (2007-2011) has been settled (Ministry of Tourism and Sports, 2007).

The Sports Development Plan sets out the objectives, goals, strategies and main roadmap of development aimed at step-by-step development. The National Sports Development Plan has five strategies as follows: 1) Basic sports development by encouraging children, youth and people to exercise and play sports to develop them as a physically, mentally and socially valuable resource, 2) Sports for the masses by providing sports and exercise to promote people of all genders and ages and strengthen unity and solve social problems, 3) Sports for excellence

by building a foundation and improving the standards of sports personnel such as athletes, trainers, places, equipment at all levels to meet standards, 4) Professional sports development in order to develop some potential international sports as standard professional sports by developing athletes and personnel to meet international standards, and 5) Development of sports science and technology for disseminating knowledge on sports science and promoting them to develop the potential of athletes, sports personnel, tools and places to be more standardized (Sports Authority of Thailand, 2017).

## LITERATURE REVIEW

### Athlete Training

Training is the practice of doing activities to make the body move correctly, repeatedly, in a consistent, step-by-step manner. It affects the work in various systems of the body to develop with maximum efficiency. Training is necessary for all athletes because the training that has been done until goal achieved, it will make the person who has been trained to be physically and mentally ready before starting the competition. Not only training has a direct effect on physical fitness or performance, but it also has other effects (Gröpel et al., 2016), consisting of 1) Mentality: sports training as a simulation of a competition so that those who have been practiced have a confidence, rational belief in one's abilities, and stable mind when the actual competition time, 2) Sociality: training will allow athletes and related people to adapt to others in order to mold the differences of each person to be the same person for the goal of mutual victory, 3) Emotion: in training, players recognize to forgive, control their emotions as well as have restraint and a good mood, and 4) Intelligence: training will allow players to use their brains or intelligence to learn skills, techniques and playing strategies so that they are able to make decisions to solve immediate problems and apply the skills trained appropriately. In sports competitions for excellence, athletes must have perfect physical fitness because it is the basis for effective sports skills practice (Gardner & Lally, 2013). A good training will positively affect athlete abilities in terms of skills, experiences and physical fitness.

H1: Athlete Training has a direct positive effect on athlete ability.

### Self-development

Sports activities help with mental development training to be able to cope with various pressures as well as to withstand stress. The Petanque Sports Association of Thailand may closely supervise athletes and bring a psychologist to train their thinking and mental development. Athletes are kept before the competition by taking care of them in getting enough and plenty rest each day, at least 6-8 hours, so that their body can rest and recover plus be ready to compete more. Meditation practice, in particular, is vital to Petanque competitions. If an athlete is trained regularly, it will result in the athlete's self-improvement even more, which will affect the athlete ability (Gardner & Lally, 2013).

H2: Self-development has a direct positive effect on athlete ability.

## Coaching Athlete

There are mainly 3 aspects of coaching athlete: 1) the principles and philosophy of being a coach, 2) the method of being a coach, 3) the style of being a coach. At the same time, Samson and Solmon (2011) portrays that the coach-athlete relationship is the most important interpersonal relationship in sports as the collaboration between coach and athlete which influences on each other. Jowett (2003) considers the perceived importance of the coach-athlete relationship and divides the trainer-athlete relationship into four components: intimacy (emotion), commitment (perception), admiration/faith (behavior), and respect. In addition, Gardner & Lally (2013) examines the relationship of coaches with Belgian athletes that football, basketball and volleyball players see the importance of the four elements. In the sports, the relationship created between coaches and athletes is an important aspect of the athlete's physical and mental development. Coaches influence the athlete's feelings, perceptions and mental state, which may increase or reduce anxiety until it leads to successful or unsuccessful competitions (Gröpel et al., 2016). The coaching behavior was negatively correlated with anxiety in athletes. Coaches, moreover, play an important role in reducing anxiety for athletes during competition. This reflects that coaching style or behavior impacts the mental state of athletes in terms of anxiety and self-confidence that affects athlete abilities (Anshel et al., 1990).

H3: Coaching athlete has a direct positive effect on athlete ability.

## Motivation for Athlete

Motivation is a factor that drives a person to behave differently. It is what causes desires or inclinations to cause a person to act towards a purpose (Phungsoonthorn et al., 2021). From this reason, there are many people who are interested in studying motivation and try to classify the motivations according to the documentations. Berger and Ower (1987) divide motivation as the expression of behavior into two types as follows: 1) Intrinsic Motivation is a condition in which a person sees the value of a good activity done willingly by considering the achievement of that activity as a reward, and 2) Extrinsic Motivation is a condition in which the individual behavior came out because something stirred, not for the sake of success at all, such as the act of wanting, rewards, ranks, and grades. Berger and Ower (1987) classify the motivation theories based on motivation sources into three types. First, physiological motivation is satisfying all physical needs for a person to live. It is an essential requirement according to human nature, including the need for water, food, rest and disease-free. The levels of physiological needs can be measured from observing the people behavior, including the degree of the action and the choice of action and countermeasures. Second, psychological motivation is less important than physiological motivation because it is less necessary for life but it will help humans psychologically to make a good mental health and freshness. This type of motivation includes curiosity, response to the environment and the need for love. Third, social motivation or learning-based motivation originates mainly from a person's past social experiences. The aim of this type of motivation is related to the reaction of other people to oneself. Social motivation is important to a person's lifestyle because it affects athlete abilities.

H4: Motivation for athlete has a direct positive effect on athlete ability.

## **METHODOLOGY**

This research was based on a quantitative research approach (Westerman, 2006). The study was divided into two phases. The first phase was a review of the relevant literature along with an examination of general conditions and situations. For the second phase, the data was collected in relation to five factors to determine what the real problem is to be able to define guidelines that can be applied to solutions. Therefore, the relationship among athlete training, self-development, coaching athlete, motivation for athlete and athlete ability was examined based on youth athletes in Thailand. A survey questionnaire was used to collect data over time. The study followed a cross-sectional research design. Data were collected from 340 youth athletes in Thailand and analyzed using a structural equation model to examine the effect sizes of athletes training, self-development, coaching athlete, motivation for athlete on athlete ability. In addition, this study included a simple random sampling from a population of young athletes to collect the most appropriate data in the current study since the population was distributed over a wide area (Ul-Hameed et al., 2019). Before the questionnaire distribution, the purpose of the study was explained to make the respondents' understanding. In addition, the respondents were assured that the information will be confidential and used for academic purposes only.

## **RESULTS**

Most of the results of the study used a structural equation model (SEM), which was best suited for data analysis. Generally, this technique was optimal for preliminary data analysis. The technique consisted of two main steps. The first step was based on the measurement model. The second step was based on the structural model. Both steps were the most important in conducting competitive analysis. Therefore, to test the hypothesis, SEM was the most important technique. This was why SEM technique was most recommended by previous studies to test the hypothesis (Hair et al., 2014; Hair et al., 2012; Ringle & Sarstedt, 2013; Henseler et al., 2014). Consequently, the current study used SEM for data analysis using measurement and structural models to examine the relationship among variables.

However, before using SEM for the current study, initial screening of the data was carried out to identify any errors in the data. The present study collected data from 340 youth athletes in Thailand. After collecting data, all answers are entered into the program for the data record. Because there was always the possibility of errors in the data which could alter the results, a preliminary screening of the data was carried out. Table 1 presented statistics for the highest and lowest values, which show outliers. All values were found to be within limits. Hence, there were no errors in the data. The current study also examined missing values in the data. This study found that the data had no missing values. Therefore, the data was valid to continue the analysis using SEM. For that reason, preliminary screening of the data was an important part of the analysis which guaranteed and eliminated errors in the data, leading to better results

(Won et al., 2017). Finally, the current study examined the normality of the data. It was found that the data was normal and correct in processing.

**Table 1: Statistical test of empirical variables (n=340)**

Variable	Range	Min	Max	$\bar{x}$	SD.	Variance	Sk	Ku
Athlete Training								
TR1	3.00	2.00	5.00	4.13	0.61	0.33	-0.33	0.12
TR2	3.00	2.00	5.00	4.21	0.54	0.26	-0.24	0.08
TR3	2.55	2.75	5.00	4.34	0.51	0.24	0.22	-0.38
Self-Development								
SD1	2.80	2.60	5.40	4.15	0.55	0.29	-0.16	-0.19
SD2	3.00	2.00	5.00	4.12	0.62	0.34	-0.46	-0.33
SD3	2.90	2.00	5.00	4.17	0.73	0.49	-0.89	1.09
Coaching Athlete								
CA1	3.00	2.00	5.00	4.17	0.66	0.45	-0.44	-0.28
CA2	3.00	2.00	5.00	4.23	0.63	0.40	-0.61	0.25
CA3	2.80	2.00	5.00	4.24	0.57	0.32	-0.62	-0.19
CA4	2.50	2.30	5.00	4.44	0.55	0.30	-0.35	-0.73
Motivation for Athlete								
MA1	2.29	2.72	5.00	4.21	0.58	0.34	-0.07	-0.79
MA2	3.00	2.00	5.00	4.09	0.60	0.34	-0.38	0.35
MA3	3.00	2.00	5.00	4.06	0.65	0.42	-0.24	-0.44
MA4	3.00	2.00	5.00	3.87	0.71	0.53	-0.65	0.50
Athlete Ability								
AA1	3.00	2.00	5.00	3.93	0.74	0.52	-0.74	0.81
AA2	3.00	2.20	5.00	4.14	0.58	0.34	-0.43	-0.24
AA3	2.60	2.30	5.00	4.19	0.54	0.28	-0.22	0.10

Table 2 showed the factor loadings by which 0.5 was considered the minimum threshold level. In the study, the athlete training was measured using a three-item scale and all items had factor loadings greater than 0.6. Self-improvement was correspondingly measured using a three-item scale and all items had factor loadings greater than 0.8. In addition, coaching athlete was measured using a four-item scale and all items had factor loadings greater than 0.7. Motivation athlete was also measured using four scale items and all items had loadings greater than 0.5. Finally, athlete ability was measured by three items and none of them had loadings less than 0.5. Hence, the athlete training variable, self-development, coaching athlete, motivation for athlete and athlete ability had factor loadings greater than 0.5.

Subsequently, the present study also examined composite reliability (CR). The results in Table 2 showed that all structural variables, comprising athlete training, self-development, coaching athlete, motivation for athlete and athlete ability, had a CR greater than 0.7, the minimum level considered in the current study and recommended by Hair et al. (2017). In addition, average variance extracted (AVE) was also above 0.6 for athlete training, self-development, coaching athlete, motivation for athlete and athlete ability. Hence CR and AVE met the minimum criteria for the current study.

**Table 2: Factor Loadings (n-340)**

Variable	$\Lambda$	SE	t-value	$R^2$	AVE	CR
Athlete Training					0.876	0.899
TR1	0.80	-		0.63		
TR2	0.96	0.05	17.461**	0.92		
TR3	0.66	0.05	13.86**	0.44		
Self-Development					0.778	0.943
SD1	0.84	-		0.70		
SD2	0.90	0.04	15.908**	0.80		
SD3	0.80	0.04	15.897**	0.63		
Coaching Athlete					0.697	0.887
CA1	0.80			0.65		
CA2	0.84	0.08	12.546**	0.71		
CA3	0.92	0.13	16.923**	0.85		
CA4	0.70	0.15	14.354**	0.48		
Motivation for Athlete					0.765	0.912
MA1	0.52			0.27		
MA2	0.97	0.12	10.927**	0.95		
MA3	0.72	0.10	12.356**	0.52		
MA4	0.55	0.06	9.102**	0.30		
Athlete Ability					0.861	0.887
AA1	0.56			0.31		
AA2	0.76		8.762**	0.58		
AA3	0.70		7.910**	0.48		

Finally, the hypotheses were tested with SEM structure-based analysis, as suggested by various studies in the literature (Henseler et al., 2009; Lubke & Muthén, 2004; Zuhri et al., 2016). Therefore, to examine the relationship among athlete training, self-development, coaching athlete, motivation for athlete and athlete ability, an investigation using SEM was conducted to study the direct effects of athlete training, self-development, coaching athlete and motivation for athlete on athlete ability.

The results of these relationships were shown in Table 3 and Figure 1 showed the SEM process. The positive direct effect of athlete training on athlete ability was found to be significant with a t-value of 4.998. In addition, the positive direct effect of self-development on athlete ability was also significant with t-value of 3.872. Moreover, the positive direct effect of coaching athlete on athlete ability had t-value of 4.763. Furthermore, the positive direct effect of motivation for athlete was found to be significant with a t-value of 6.229. As a result, it depicted that athlete training, self-development, coaching athlete and motivation for athlete enhanced athlete ability.

Figure 1: Conceptual Model

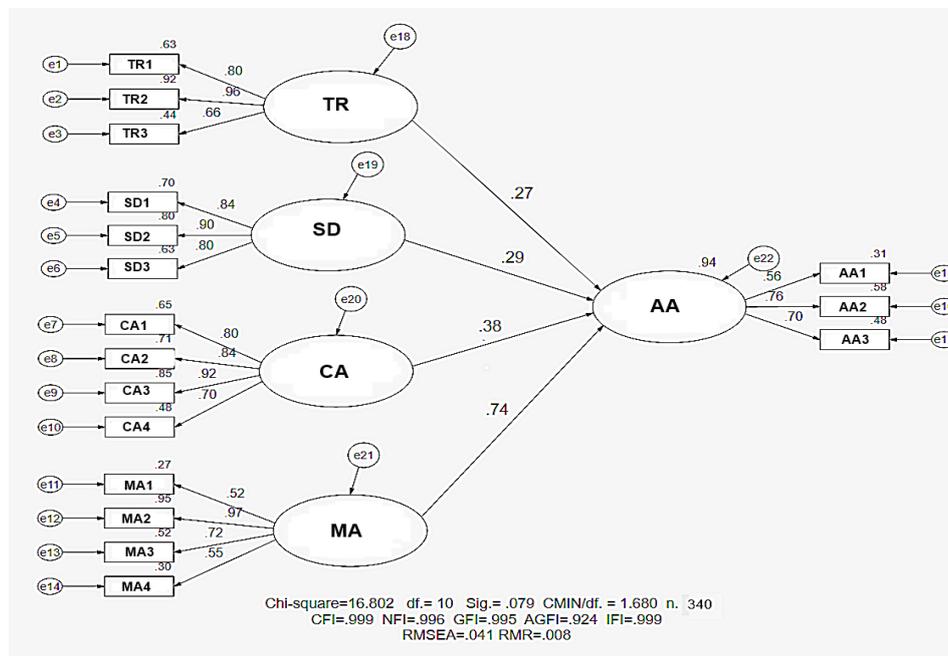


Table 3: Results of hypotheses testing

Variable		$\beta$	SE.	t-value	Sig.
AA	<-- TR	0.33	0.03	4.998	0.000**
AA	<-- SD	0.29	0.04	3.872	0.000**
AA	<-- CA	0.43	0.02	4.763	0.000**
AA	<-- MA	0.54	0.05	6.229	0.000**

\*\* Statistically significant 0.001

Therefore, the collected data was analyzed using confirmation factor analysis (CFA) with structural equation modeling (SEM) technique. The researchers examined the items in the questionnaire for their validity and reliability. To determine the factor loadings obtained by testing the validity of the factor structure, the researchers found: Chi-square ( $\chi^2$ ) = 16.802; degrees of freedom (df) = 10; p-value = .079;  $\chi^2/df$  = 1.680; Root Mean Square Error of Approximation (RMSEA) = .041; Goodness of Fit Index (GFI) = 0.995; Adjusted Goodness of Fit Index (AGFI) = 0.924; Normed Fit Index (NFI) = 0.996; Incremental Fit Index (IFI) = 0.999; Comparative Fit Index (CFI) = 0.999 (n = 340). In addition, athlete training, self-development, coaching athlete, motivation for athlete explained the variance of athlete ability by 94.0 percent ( $R^2 = 0.94$ ). Furthermore, the R-square of 0.94 indicated that athlete training, self-development, coaching athlete, and motivation for athlete were expected to bring about a 94 percent change in athlete ability.

## CONCLUSION AND DISCUSSION

How to build athlete ability must first build the athlete self-confidence. Athletes have used a variety of methods to build self-confidence, depending on three different situations. First, while practicing before the competition and while having no self-confidence during the rehearsal, it focuses on making athletes more capable during training in line with what athletes use as information to increase their abilities. Second, in the period before competition, the athletes will focus on comfort, order of ideas and self-stimulation. The athletes use common methods in everyday life and sports psychology techniques. Third, while the athletes do not have self-confidence, athletes will relax, control and cut their thoughts, which is consistent with self-confidence approach (Wegner, 2017). However, it can be noted that Thai athletes have not yet used the method in sports psychology since the introduction of sports psychology is not widely used and athletes do not see the importance of sports psychology. Therefore, self-confidence in sports should be created by practicing thinking system and sports psychology techniques, including creating a source that increases self-confidence for athletes. It should be integrated with the methods that athletes are already using, such as praying regularly to generate meditation, the use of accurate speech to motivate oneself, the effective imagination often used before competitions, etc.

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