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# **Confirmatory Factors Analysis of Sport Management Factors Affecting Exercise and Playing Sports on Adolescent in Bangkok**

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#### **ABSTRACT**

The study aimed to study the confirmation of factors in sport management affecting exercise and sport participants of the adolescents in Bangkok. The sample group consisted of 1,000 adolescents exercising and playing sports at the Youth Sport Center. The research instruments were comprised of a questionnaire developing the sport factors which were sport management resource factors, PDCA cycle factors, and environmental factors. The results of the development of sports management factors were analyzed for confirmatory factor analysis with LISREL program. The relationships of sports management factors affecting exercise and sports participation among adolescents in Bangkok.

The research results showed that the development of three sports management factors affecting exercise and sport participation of adolescents in Bangkok were consistent with the empirical data with the statistical significance at the level of 0.05. In the model of environmental factors affecting exercise and sport participation of adolescents in Bangkok, the weights of the variables namely policy and politics, economy, society and culture and technology were observed. It was found that social and cultural variable highly affected the exercise and sport participation of the adolescents in Bangkok with the highest component weight.

#### Keywords

Confirmatory factor analysis, Sport Management, Adolescent sport

#### Introduction

Certain Bangkok Youth Centers have been renovated in all aspects to support the accessibility of Thai teenagers in Bangkok although some places need to be improved. There are various and more interesting activities for the general public or teenagers to use the services of the Bangkok Youth Centers. The youth center is a place for young people to have the opportunity to show their athletic abilities and talents. It is also a place where teens can exercise and play sports as well as spend time with family and friends. Thus, the researcher interested in studying the concept of management resource (4M's) and management resource concept to summarize the appropriate sports management resources for this research consisting of 1) Personnel, 2) Budget, 3) Public relation and information and 4) Facilities. The popular quality cycle theory used in various organizations has been adopted to be a tool to monitor the operations of the organization. The quality cycle theory (PDCA) (Deming, 1986) consists of 1) planning2) doing 3) checking and acting used in this research. Since this is a theory that organizations used in improving the quality of the organization, it can prevent problems that should not arise and reduce losses in various ways. There are periodic quality checks on the work making the operations more concise and solving problems quickly. The external (PEST environmental factors ANALYSIS) (Aguilar, 1967) were studied including 1) Political Factors 2) Economic Factors 3) Social-Culture Factors and 4) Technological Factors. The organization's environmental study will provide an understanding of the general situation of the organization, the youth center, as well as the needs of adolescents in Bangkok. It also allows related parties recognize the condition and need of the youth centers in Bangkok. It further provides the information on what the operation is being done today and what factors will respond to the needs of adolescents. The results can inspire, motivate, and raise the awareness in exercising and sports participation for more teenagers in Bangkok.

To study the important factors that affect Thai teenagers in Bangkok to turn their attention to exercise and sports is vital. In Bangkok, teenagers are studying intently but at this age, it requires

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energy to perform a variety of activities. However, Bangkok is a competitive city. Many teenagers need to focus on their study both at schooling and tutoring after school. Inevitably this causes no time to exercise and play sports. If the youth center is not attractive or attracts teenagers to exercise or play sports, it Inevitably results in the youth's physical performance being deteriorated. They cannot do various activities and it brings negative consequences among physical mental emotional and social aspects. The youth center is therefore an important part in promoting and developing potential of the youth. It is a place to do creative activities of young people, family members, communities and the general public. It provides opportunities for social exchange especially as teenagers are the age that is going to grow into adulthood. Having a youth center ready is a way to support teenagers' exercise and sport. Being a center of activities can promote good relationships between families. It also helps teenagers to grow into adults with quality of life.

Bangkok Metropolitan Administration's Action Plan for the year 2017 aims to develop Bangkok into a livable city in all aspects. One of the most highly need to be developed human resources are: children and youth. The researcher is therefore interested in studying adolescents in Bangkok aged between 10-19 years who are in the period of study. They are growing up and soon will reach adulthood in order to be ready to be a working force that will benefit the country. Therefore, supporting and encouraging Thai teenagers to grow into healthy adults in the future is essential as it is vital that the children now can grow to be heathy adults. Those who play an important role in promoting exercise and sports are their parents. They must set an example and act accordingly. They will encourage the children or the teenager to love exercising and playing sports. Thus, they will play sports regularly. This will create a character that is good for exercise and sport for the rest of your life (Sathongthian, 2012). The support of family and friends is called Social Support. This strategy has been used to address behavioral health problems, including physical health, mental health, exercise promotion, and many more.

For the reasons mentioned above, exercise and sports play a role are very important to improving the quality of the population especially

adolescents who are going to be a workforce in the future. Adolescents are the age of learning in new things. Bangkok has been recognizing the importance that adolescents are in the future development of the nation. Additionally, exercise and sports are instrumental in improving the quality of life for young people while developing Bangkok to be a happy city. There are 6 strategies for Bangkok Vision 2032 which are linked to the 20-Year Development Plan (2013-2032) on issues related to exercise and sports. The first strategy is to develop the Bangkok to be a safe metropolis which emphasizes on disease-free urban with food and safety. The aim of the strategy is developing and promoting lifestyle and exercise behavior of Bangkok people to be free from various noncommunication diseases and be healthy both mentally and physically by exercising, playing sports and engaging in recreational activities. Roles and duties of Bangkok in relation to the performance of the government's strategy is the youth center, which is responsible and operated by Culture, Sports and Tourism Department. In addition to this, child development is investment for the country's future (Supakit Sirilak, 2013). The researcher is therefore interested in studying the factors of sports management affecting exercise and sport participation of the adolescents in Bangkok. The study was conducted through the youth centers of Bangkok which are divided into different groups across 50 districts of Bangkok. They were consisted in a total of 6 groups with a total of 33 youth centers currently operating. The study was conducted to study the factors of sports management that affected exercise and sport participation and to find relationships that affect the physical exercise and sport participation of the adolescents in Bangkok. This is to identify factors in sports management that will help promote and build young people to have a good quality of life. It is a part of building a Bangkok society as a livable city. Bangkok will become a safe metropolis or a city of opportunity allowing Bangkok to be the future Asian metropolis.

# Research Objective

- To development sports management factors affecting exercise and sport participation of the adolescents in Bangkok.

#### **Literature Review**

# **Management Resource Factors**

According to the literature review of various scholars related to management resources, it has been explained that management resources are fundamental to the management of any affairs whether it is public administration or private business management. Management resources which are fundamental to management. because it is considered an essential factors that are indispensable. There are four essential resources known as 4M's: Man, Money, Material, Material and Management. Barney (1991) stated that resources are what sports organizations use in planning strategies to improve their efficiency and effectiveness. The resources organizations are: physical capital, human capital, organizational capital and financial capital. Mull et al. (1997) further explained that effective sports management support system consists of personnel resources including operating personnel budget management including income expenses as well as facilities and equipment including stadiums and sports equipment.

The concepts of resources used in sports organization management include the concepts from Barney (1991), Mull et al. (1997), Chelladuri (2009), Misener and Donerty (2009), Wheelen and Hunger (2002). The process has been synthesized to acquire sports management resources that are essential to be used in the organization to support the goals of the Bangkok Youth Center. The first element is 1) personnel which is the nature of a group of people in the organization. It consists of executive who practices creating various operational activities in the organization with quality, knowledge and expertise. It also includes the ability that organizations desire to work together through efficient and effective processes in the use of the organization's resources including management staff, organizational staff and volunteers. One of the most important organizational resources is the or personnel who determine organization's objectives or goals. 2) Secondly, budget is part of the financial reporting process. Accounts shown are numbers produced by the organization during the accounting period to report to management, such as the source of

funds, external funding source, and enterprise expense items. 3) the third element is public relationship and Information. Bernays (1980) explained that public relations means spreading out to the public, persuading people to participate and agree on the objectives and methods of operations of the organization and coordinating the opinions of relevant people's groups with the corporate objectives. Public relations is the management of communication between organizations and the public. Baskin, Aronoff and Lattimore (1997) described the meaning of public relations as the management of an organization to build good relationships with the recipients of various news groups to create an understanding of opinion, attitude, and value, or to communicate with the community both inside and outside to create an image of the organization with the public. 4) The fourth element is facilities. Sukys et al. (2014) has defined that managing sports venues and equipment refers to one of the general management processes that need to be managed. Management is material, which is a component of the general administrative resource utilization factor to make the most of the facilities, equipment and sports facilities.

# **Deming (PDCA)**

Management process is the stage of an activity that is arranged in order in each step of the activity or action. There must be a coherent relationship as a guideline for best productivity and quality using minimal time and resources. Many scholars have defined the management process or function of management (Gulick and Urlick, 1973). Later, Deming (1986) proposed the concept of Quality Cycle Management (PDCA) to control the quality of the organization.

- 1. Planning (Plan) means a component of the cycle that is important because planning is the starting point of the operation and is an important part of working in other areas to be effective.
- 2. Doing (Do) means taking action according to the plan set out in the plan schedule. The organization members must understand the importance and necessity of the plan. The success of implementing a plan requires good cooperation from the organization's personnel. If the plan does

not go according to plan, a new plan may be revised to be implemented.

- 3. Checking (Check) means to verify whether the performance of the work goes according to the plan or solve the problem as planned. How was the result? Is the problem solved in line with the organization's goals? And what is the cause the failure of the plan?
- 4. Acting (Act) means an action after a 3-step process cycle has been completed. An update can be a quick fix or find out the cause of the problem to prevent the same problem.

# **Environmental Factors Affecting Exercise and Sport Participation in the Adolescents**

Wheelen and Hunger (2012) stated that the external environment is generally broadly external. It is not directly related to the operations of the organization, but it can have an indirect influence or impact on corporate operations. Daft (2015) included political and legal, economic, social, and technological factors, which can be described in detail as follows.

- 1. Political Factors are what the organization should monitor to analyze and create strategies. because these factors can have a positive or negative impact on the organization. These factors can be an opportunity or a obstacle to the organization such as government policy and stability. Political developments and government policies affect the industry and legal factors such as amendments to laws and revisions regulations that affect the modifications of management methods. Some laws will benefit the organization's strategy while some other laws are against the implementation of the strategy. Therefore, management must consider whether the legislation will benefit or become a disadvantage the organization.
- 2. Economic factors are important environmental factors that indicate the allocation of administrative resources. Additionally, they are highly important to the organization's business operations such as inflation, interest rate, tax rates, inflation and unemployment rates. The most important aspects of economic factor analysis are those for forecasting future economic conditions

- so that the organization will be able to plan the operations properly.
- 3. Social and cultural factors are an environment that relates to social characteristics. They are directly involved in daily life and influence consumers' buying behavior. These factors must be taken into account by management considering changes in various areas. They should also try to look for opportunities or obstacles to the business operations. This can be used in determining the appropriate strategies such as gender structure, age, education level, attitudes, values, beliefs, customs and traditions as well as consumer behavior.
- 4. Technology factors are the arrival of new technologies. They inevitably affect the organization the in terms of level competitiveness such as the production of products or services, changes in work processes, production various process. technological innovations, industrial machinery and information technology.
- I have studied and reviewed various literature about the environment affecting the exercise and sport participation of the adolescents in Bangkok. This concept is derived from PEST analysis with emphasis on policy and politics, economy, society and culture and technology, and also focus on family, peer groups, adolescent activities.

#### **Methods**

Confirmatory Factors Analysis of Sport Management Factors Affecting Exercise and Sports Participation of the Adolescent in Bangkok was conducted by applying quantitative research method.

# **Population**

Sports personnel of the Bangkok Youth Centers and adolescents who were the members and came to exercise and play sports at Bangkok Youth Center at least once a week.

#### Sample Group

1. Sports personnel of the Bangkok Youth Centers consisted of one head of the youth center or one

acting head of the center, one staff member of exercise and sports activities. The data were collected at 17 youth centers. In each center, the data were collected with two people (the head of youth center or acting officer and one exercise and sports activities officer), The data were collected with a total of 34 people. Purposive sampling was applied to collect the data.

2. Adolescents who were the members and came to exercise and play sports at the Bangkok Youth Centers. They were selected by purposive sampling method. The selection criteria of the adolescent group were set as the adolescents were aged between 11-19 years old. They were divided by the age range of adolescents including early adolescents aged 11-13 years, middle teens aged 14-16 years and late teens aged 17-19.

To determine the sample size used in this survey, it was adolescents who were members and used the services at Bangkok Youth Center. Sample size was important because the sample size must be large enough to be reliable. A sample should consist of 500 people should be used for analysis. However, since the adolescent sample was also divided into three age groups, the researcher increased the sample size to 1,000, which was considered the most appropriate (Tabachnick &

Fidell, 2012). Moreover, it was in accordance with Hair et al. (2014) because it was an acceptable ratio in a factor analysis study of one thousand people to better represent and replace the missing questionnaire.

Therefore, a sample group of teenagers who are members and come to service at Bangkok Youth Center of 1,000 people were selected by quota sampling for the distribution of data according to the proportion of the number of service users of Bangkok Youth Center as follows: 1) the new dimension youth center of 400 people. 2) Level A youth center of 306 people and 3) Level B of 306 people. Thus, a total number was 1,000 people with the number and age range of age.

# **Data Analysis**

**CFA** (Confirmatory Factor Analysis)

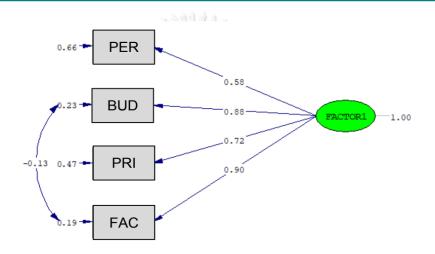
#### **Results**

Results of Confirmatory Factor Analysis of Sports Management Resource Factors Affecting Exercise and Sporting of Adolescents in Bangkok is demonstrated as follows:

**Table 1.** Summary of structural model fit and the empirical statistics of sports management resource.

Model fit indices	Criteria	Statistics from data analysis
χ2	p-value > 0.05	0.74
$\chi 2/df$	< 2.00	1.00
GFI	> 0.90	1.00
AGFI	> 0.90	1.00
CFI	> 0.90	1.00
SRMR	< 0.05	0.00
RMSEA	< 0.05	0.00

Passed the criteria of model fit indices



Chi-Square=0.74, df=1, P-value=0.39070, RMSEA=0.000

**Figure 1**. Model of Sport Management Resource Factors affecting Exercise and Sport Participation of adolescents in Bangkok

According to Table 1 and Figure 1, the confirmatory factor analysis results showed that Chi-square = 0.74, df = 1, p-value = 0.39, GFI = 1, AGFI = 1, RMR = 0.00, RMSEA = 0.00, CFI = .1, NFI = 1. The model is consistent with the empirical data. The element weight was positive. Personnel (PER) had element weight of 0.580 with 33.6 percent of the variance. Budget (BUD) had element weight of 0.877 with the variance of 76.9 percent. Facilities (FAC) had a composition weight of 0.902 with the variance 81.4 percent.

participation of the adolescents in Bangkok. This can be seen from the highest element weight. Facilities were the highest affecting the decision to exercise and play sports of adolescents in Bangkok more than the other observable variables.

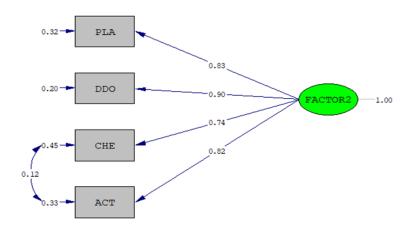
Results of Confirmatory Factor Analysis of Quality Cycle Affecting Exercise and Sport Participation of Adolescents in Bangkok is demonstrated as follows:

It can be explained that the factors of sports management resources affected exercise and sport

**Table 2.** Summary of structural model fit and the empirical statistics of Quality Cycle.

Model fit indices	Criteria	Statistics from data analysis
χ2	p-value > 0.05	2.39
$\chi 2/df$	< 2.00	1.00
GFI	> 0.90	1.00
AGFI	> 0.90	1.00
CFI	> 0.90	1.00
SRMR	< 0.05	0.00
RMSEA	< 0.05	0.04

Passed the criteria of model fit indices



Chi-Square=2.39, df=1, P-value=0.12209, RMSEA=0.037

**Figure 2**. Model of Quality Cycle Factors Affecting Exercise and Sports Participation Among Adolescents in Bangkok

According to Table 2 and Figure 2, the confirmatory factor analysis results showed that Chi-square = 2.39, df = 1, p-value = 0.12, GFI = 0.99, AGFI = 0.99, RMR = 0.00, RMSEA = 0.037, CFI = 0.99, NFI = 0.99. This illustrated that the model is consistent with the empirical data. The element weight was positive, planning (PLA) was 0.825 element weight with 68.1 percent of the variance. Doing (DDO) had the element weight of 0.897 with 80.4 percent of the variance. Checking (CHE) was 0.74 element weight with 0.132 percent of variance. Acting (ACT) was 0.817 element weight with 24.4 percent of variance.

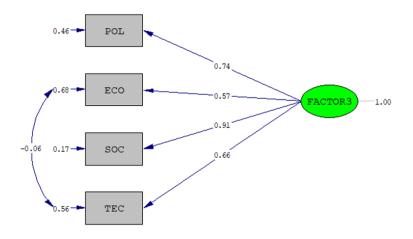
When determining element weight values, it can be explained that the quality cycle factors affected the exercise and sport participation of the adolescents in Bangkok with the highest element weight. "Doing" was the highest variable affecting the exercise and sport participation of the adolescents in Bangkok more than other observable variables.

Results of Confirmatory Factor Analysis of Environmental Factors Affecting Exercise and Sport Participation of Adolescents in Bangkok is demonstrated as follows:

**Table 3.** Summary of structural model fit and the empirical statistics of Environmental Factors.

Model fit indices	Criteria	Statistics from data analysis
χ2	p-value > 0.05	1.63
χ2/df	< 2.00	1.00
GFI	> 0.90	1.00
AGFI	> 0.90	1.00
CFI	> 0.90	1.00
SRMR	< 0.05	0.00
RMSEA	< 0.05	0.02

Passed the criteria of model fit indices



Chi-Square=1.63, df=1, P-value=0.20170, RMSEA=0.025

**Figure 3**. Model of Environmental Factors Affecting Exercise and Sport Participation of Adolescents in Bangkok

According to Table 3 and Figure 3, the confirmatory factor analysis results showed that Chi-square = 1.63, df = 1, p-value = 0.20, GFI = 0.99, AGFI = 0.99, RMR = 0.00, RMSEA = 0.025, CFI = 1, NFI = 0.99. This illustrated that the model is consistent with the empirical data. The element weight is positive. Policy and Politics (POL) element weight was 0.736 with 73.6 percent of variance. Economic (ECO) element weight was 0.566 with 32 percent of variance. Social and cultural (SOC) element weight was 0.910 with 82.9 percent of variance and the technology (TEC) had a element weight of 0.663 with percent of the When determining element weight values, it can be explained that the of environmental factors affected the exercise and sport participation of the adolescents in Bangkok with the highest element weight. Social and cultural variable was the highest variable affecting the decision to exercise and play sports of adolescents in Bangkok more than the other observable variable.

#### **Discussions**

According to the data analysis and research summary on Factors of Sport Management Affecting Exercise and Sporting of Adolescents in Bangkok, the main points and research objectives can be discussed in the results as follows:

# The Development of Sports Management Factors Affecting Exercise and Sport Participation of the Adolescents in Bangkok

Confirmatory factor analysis of factors affecting exercise and sport participation of the adolescents in Bangkok consisted of sports management resource factors, quality cycle factor and environmental factors. It was found to be consistent with the empirical data and the research framework. The results of the research were concluded that the sports management factors developed from various concepts, theories, documents and research can be used in the development and promotion of exercise and sport participation of the adolescents in Bangkok. Each of the three factors can be described as follows:

In terms of sports management resource factors, it is consistent with the empirical data. Facilities were the strongest variable that affected the exercise and sports participation of adolescents in Bangkok. If the facilities are in good condition and ready to be used, it allows teenagers to exercise and play sports whenever they want. This was in line with Prins et al. (2010) who studied the influence of sports facilities among adolescents. It was found that adolescents were more motivated to exercise and play sports if the facility was in a ready-to-use condition and not damaged.

In terms of quality cycle factors, it is consistent with the empirical data. The variable "doing" was the strongest variable that affected the exercise sports participation of adolescents in Bangkok. Doing is the implementation of sports activities to meet planned programs It included projects and activities organized every year focusing on family and friends to do activities together. This was in line with research data from youth center heads and sports and exercise activities staff who organized an ongoing activities such as futsal and badminton. This is consistent with the research that most teenagers played futsal. However, this was not consistent with the American college of sports medicine (2015) suggesting that the activities must be diverse because teens do not enjoy strenuous activities all the time because some people are concerned about sports injuries.

In terms of environmental factors, it is consistent with the empirical data. Social and cultural variables affected the exercise and sport participation of adolescents in Bangkok the most. The society and culture around the teens including parents, friends, teachers and even people who were famous in sports influenced how they played sports. More importantly, the teenagers themselves like or are interested in what activities. These are all important influences. It is an incentive for teens to exercise and play more sports. This was in accordance with Peykari et al. (2015) who studies on promoting the physical activity of adolescents. It showed that most adolescents understood and recognized importance of exercise. However, they lacked of motivation to exercise and play sports. It was suggested that the teens should focus on activities that they could do with their parents or guardians and should focus on the teenagers themselves as the center of their own interests.

# The Relationship Between Sports Management Factors Affecting Exercise and Sport Participation of Adolescents in Bangkok

Environmental factor was the only factor that was able to predict relationship of the sports management factors affecting the exercise and sports of adolescents in Bangkok with statistically significance at the .05 level. Environmental factor affecting exercise and sports participation studied

and used in this research was the social and cultural environment that results in young people exercising and playing sports at youth centers family, friend groups, including personal preferences in exercise and sport, family status and economy as well as the nature of adolescents in their age that they like challenging and extreme activities. According to Rice (1996), adolescents developed within the complex environment, community and country, friends, parents, relatives, teachers, religious institutions, the media and various events that teenagers experience. All of these influence adolescents. It can be said that part of the adolescent is the product of these environments. This is in line with the Barnett et al. (2019) who studied that environmental factors which were family and friends group who supported the availability of physical activities and sports for adolescents. In accordance with Sukys et al. (2014), parents were found to have an effect on adolescent motivation for exercise and sports. Both parents affected female adolescents while only fathers affected male adolescents in exercise and sports. This study supported that parents played a significant role in adolescent development which the age where they have their own identity and the freedom to choose activities that they enjoy and willing to continue exercising and playing sports that will benefit them. This is in line with Brown et al. (2017) who was found that adolescents should choose to exercise and play sports that they enjoy and suit themselves because they can help with the development of adolescents through activities that they enjoy and interest.

According to the analysis of the confirmatory factor analysis on the environmental factors exercise and sport participation of adolescents in Bangkok, social and cultural variable was the highest weight affecting exercise and sport participation of adolescents in Bangkok when compared with other observable variables. This is in accordance with Parker et al. (2018). It was found that society and culture were among the factors that led to different physical and sports behaviors. It can be divided into 3 types which were very little exercise, moderate exercise, and exercising very hard. This was partly from the environmental influence of the teenagers whether it was their leisure behavior to choose activities in exercise and sports including the motivation for doing various activities in everyday life especially friends who were the person closest to teenagers when they were at school as well as persuading each other to do various activities. Kubayi et al. (2014) also mentioned that adolescents enjoyed exercising with friends more than family because teens believed they were encouraged to participate in more sports such as inviting them to play as a team or group together for competition. It was consistent with research findings from sports personnel who were the youth center heads and sports activities staff and the adolescents who were the members at the youth center. It was found that most of the youths at the Bangkok Youth Center become a member by solicitation from friends as well as exercising and playing sports with friends as much as possible.

The research results showed that friends had a great influence on how a teenager lived including exercise and sports aspect. This was in accordance with Salvy et al. (2009) who stated that adolescents were more motivated to exercise or play sports when exercising with a group of friends rather than doing activity alone. However, addition to promoting and supporting adolescents' exercise and sports, friends can also create pressure or stress for teenagers due to the competitive environment at school. This means that adolescents will pursue exercise and sports habits. It does not depend on the family environment alone but a school environment with friends, physical education teachers or sports coaches also has an impact on teenagers' physical activity and sport.

For the exercise and sports of adolescents in Bangkok using the ideas of Kusinitz and Fine (1995), the researcher found that the physical activity index was the least complete exercise because most teenagers had a little bit of intense exercise, slightly fast heartbeat and quite tired with faster heartbeat. This is inconsistent with the World Health Organization (WHO, 2010) that recommends moderate to vigorous exercise but consistent with the duration and frequency of exercise. This is because most teenagers spend more than 60 minutes of exercise time and frequency of exercise is greater than or equal to 5 days a week. This is consistent with the World Health Organization recommending about physical activity for children and young people

aged between 5-17 years old that children and young people should perform at least 60 minutes of cumulative physical activity every day because doing physical activity more than 60 minutes every day brings more health benefits. This is consistent with the research of the head of the youth center and staff of exercise and sport activities. It was found that the Bangkok Youth Center has a policy to organize exercise and sport activities for each activity more than 60 minutes, recognizing the intensity and duration exercising that will affect the body of the teenagers. Nevertheless, it was not consistent with the research finding. Most adolescents' physical activity index scores were less than 15. It means that they had the least physical exercise. It also suggests that adolescents in Bangkok had too little exercise and sport participation. Although the Bangkok Youth Center was organized based on the theory of sport management that has been accepted widely. Each activity was held over 60 minutes including opening hours from Monday to Sunday but these reasons were not enough to ensure that teens got the most out of exercise and sports at the highest level. The teens did not have adequate physical activity due to factors such as lack of motivation or unattended while exercising. There is no suitable exercise facility. They might not getting the right advice and there was no proper exercise equipment. These were the factors contributing to the low levels of physical activity in teens today. For this reason, the relevant authorities must take into account and design serious physical and sports activities. They should also look for new activities that can attract the attention of teenagers. This will make teenagers more interested and turn to exercise and play sports. From the concepts, theories, documents and various research works that the research team has studied when analyzing the confirmatory factor analysis with empirical data, and to find relationships among factors of sports management affecting exercise and sports, it shows that the youth center appropriately operates based on suitable theories. Nonetheless, the research results show that the youth center still organizes the same major activities every year. It is relatively repetitive for teenagers who had to join the same activities every year such as futsal and badminton. The youth center should organize new activities in addition to activities organized annually. They should provide a wider variety of physical

activities and sports to serve the nature of adolescents who like a challenging and fun activities that can relax them. The American College of Sports Medicine (2015) advised that the physical activity of children and adolescents that most teenagers participate in physical activities and sports because they want to have fun. They want to make new friends and learn new things in life beyond the classroom. Moreover, teenagers' exercise and sports activities should be diverse. This includes organizing activities that are challenging for teenagers. This was in line with Teen Rehab (2017). The benefits of playing extreme or challenging sports are that it will help in the release of healthy adrenaline hormones. Moreover, playing extreme challenging sports release endorphins, which are the secretions of happiness that can help reduce stress and anxiety. It can also build relationships with a new group of friends who have the same passion for sports.

# **Suggestions**

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- 1. Research should be conducted with subjects who exercise and play at least 3 days of sports per week or exercise and play sports regularly to obtain a clearer information on factors of sports management affecting exercise and sports of adolescents in Bangkok.
- 2. There should be a study conducted with different age groups at the youth center to collect more comprehensive information on the factors of sports management affecting exercise and sport of different age groups.
- 3. A qualitative study should be conducted in conjunction with quantitative research in order to collect data that can make the research results more complete.
- 4. The factors of sports management affecting exercise and sport of adolescents should be studied in order to know the effects of other sports management factors and can develop those factors along with the results of this research.
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