

# The Influence of Exercise Motivation and Motor Ability towards the Table Tennis Playing Skills

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**Keywords:** Skills, Motivational Exercises, Motor Skills.

**Abstract:** This study aims to determine the effect of exercise motivation and motor skills on table tennis playing skills at junior athletes PTMSI Cianjur regency of West Java, and to know the difference of influence between them to the skills of playing table tennis. The method used in this research is ex post facto. To obtain the data in the field, this research uses exercise motivation scale and motor ability test, and test of table tennis ability is arranged based on indicator. The data needed in this research are exercise motivation data (X1), motor skills (X2), and table tennis skills (Y). Based on the results of processing and data analysis obtained conclusion as follows; 1) There is a positive effect of exercise motivation on the skills of playing table tennis. 2) There is an influence of motor skills on the skills of playing table tennis. And 3) There is a difference in the effect of exercise motivation and motor skills on table tennis skills in junior athletes PTMSI Cianjur regency of West Java, where sports motivation contribute more to the skills of playing table tennis when compared with motor skills. Motivation exercises play a very important role in improving the quality of the exercise process in table tennis.

## 1 INTRODUCTION

Sports coaching among the community is aimed at stimulating and growing the motivation and participation of the community to exercise actively and purposefully so that everyone will accept and exercise as an integral part of their life. Sport coaching is done well and boils down to the increase in achievement. Especially if done gradually, tiered and continuously through search and monitoring, breeding and filing and education based on science and technology effectively and efficiently. This fact shows that sports coaching is essential to achievement, which in turn can bring the name of the nation and the country on the international stage.

A fact that can be observed in the sports world shows the tendency of a rapid increase in sport performance from time to time. This can be seen from the continuous record-breaking of certain sports, and the appearance of more effective and efficient movement techniques supported by excellent physical and psychological conditions. Given the increasing trend of achievement, to participate and compete with other players in the sport of achievement, it must develop the physical quality, technique, and tactics demanded by certain

sports. For that required a program of guidance of achievement that are planned, directed, implemented, and executed systematically. Many factors must be taken into account in developing a sports performance improvement program, including clear coaching objectives, appropriate training materials and methods, and evaluations that can measure the success of the coaching process itself. Besides, it is also necessary to consider the characteristics of athletes who are nurtured both physically and technically, tactically, the ability of trainers, facilities and facilities, as well as environmental conditions of coaching. Therefore, coaching and development of sporting achievements especially at an early age should be handled more seriously and become a complex national program, as it demands fundamental and comprehensive conceptual thinking as well as ongoing implementation from early age to golden age.

One group of people who became the object of fostering and socializing the sport is a young age group in schools and sports clubs. As one of the targeted groups, this group is a group that should get attention, because this group enables the possibility of emergence of athletes achievement. In these times physical activity in the form of a game is the activity

most interested by children. Sports coaching among children is mainly to facilitate the physical, psychological, environmental and social development of children through playing and training, with pleasant physical activity. To socialize sports among children, a few things need to be taken into consideration, among them are the sports should be interesting, easy to play, fun and the availability of tools and facilities and coaches or coaches. These criteria have been owned by several sports including table tennis.

Indonesia's national tennis coaching pattern is implemented in stages. To achieve high achievement, a tennis athlete first learns and practices starting from an early age in clubs, and subsequently fostered in centralizing the region. Today, Indonesia is one of the countries that has many table tennis players. Several local, national and international events are mostly conducted. However, recently with the increasingly tight competition in the world table tennis, felt the stagnation of the development of table tennis performance in Indonesia, Some table tennis players are not able to speak much. Forget about winning the world championship, we cannot even stand out much in the Southeast Asia championship. It has been difficult for Indonesian table tennis players to win official championship events. Even today it can be said that Indonesian tennis players become athletes who are ranked below and not counted well for Asian championships. As a result, it must be anticipated and resolved, the tennis community through the Parent of the national sports organization should set up and develop a coaching system to boost the achievement of tennis at the International championships. The All Indonesia Tennis Association should seek to evaluate carefully and improve existing coaching patterns, and develop them towards a better, more effective and efficient. One of them is by examining aspects of physical and technical aspects of psychology in several societies of tennis in Indonesia.

The coaching of the table tennis sport at a young age is a starting point for coaching, with planned, regular, programmed, systematic, and continuous, expected, time-consuming, "Golden Age" exercises expected athletes to achieve optimal performance. For that it should not only fix the athletes' achievement right now, but no less important is to foster and develop buds of talented athlete as early as possible so that at "golden age" the athlete is able to excel as much as possible.

Athlete coaching on individual game sports like table tennis requires careful handling and coaching on an individual basis. To achieve the achievement of the optimal table tennis, athlete is required the process

of learning and training which are done carefully, continuous starting from junior, systematically, tiered and continuous. For that we need an in-depth study of how to improve the skills of playing table tennis to achieve optimal performance. The author tries to examine and analyze from the physical and psychological aspects as well as his influence on the skills of playing table tennis.

As for the authors of the study, among others, about exercise motivation and athletic motor skills, which allegedly can affect the skills of playing table tennis. For that need to be studied in depth through this research.

Based on the background, problem identification and problem restrictions that have been proposed, it can be formulated problems in this study, as follows:

1. Can exercise motivation affect the learning outcomes of playing tennis skills in junior athletes?
2. Will motor ability affect the learning outcomes of playing tennis skills in junior athlete's son?
3. Is there any difference in the effect of motivation of exercise with motor ability, to the learning outcomes of playing tennis skill in male junior athlete?

## 2 LITERATURE REVIEW

### 2.1 Theoretical Review

Before describing the results of learning the skills of playing table tennis, first described about learning motion skills. Because the skills of playing table tennis can only be controlled after going through the learning process and one type of learning that is closely related to the mastery of such skills is learning motion skills.

Understanding the learning of motion skills in this study is assumed to be commensurate with motor learning, because learning motion as a process that leads to the effort to acquire changes in motion behavior is closely related to the term skill, this is due to changes in behavior expected from motion study in the form of motion skills in the sense broad, therefore skill is a manifestation of the result of motion learning. Although there is a diversity of opinion of experts on the notion of learning, but generally in some basic matters. They agree that learning includes at least three basic characteristics: (1) learning is characterized by behavioral change, (2) change is relatively permanent, (3) change is obtained through training or experience. Further Burden and Byrd cite Bloom's view of the domain of learning goals stating

that; Changes in learning behavior include three categories of domains: (1) cognitive behavior, (2) affective behavior, and (3) motor behavior.

Changes in cognitive behavior in the form of intellectual thinking skills, affective behavior is characterized by the response attitude, feelings, emotions, and motivation of athletes to learning, while motor behavior in the form of motion of the limbs under the control of the nervous system. These three domains serve as the criteria of change that must be attained by athletes, and the degree of mastery of the athlete against the learning objectives is called learning outcomes.

Based on the description it can be argued that learning is a process that leads to behavioral changes (either cognitive, affective, or psychomotor) that is relatively settled as a result of the exercise process or experience and not because of the influence of temporary body conditions such as those caused by pain, fatigue or drugs, while the learning outcome is the level of athlete's mastery of the learning objectives set.

Although the term skill has many meanings, it is usually used to describe a person's ability to complete a task. Many experts have tried to give understanding of skills, interpreting skills as a degree of success in achieving goals effectively and efficiently. According to Anderson (2011), the term skill is also defined as the procedural ability of how to perform a particular motion task ranging from the simplest to the most complex. Skill in this sense implicitly refers to a particular task or action and becomes an indicator of a level of proficiency in relation to the attainment of a goal. In its function as an indicator of a level of proficiency, a skill is conceived as a competence exhibited by a person in performing a task related to the achievement of a goal.

The higher a person's ability to achieve the expected goals, the more skilled the person is. A skilled tennis player performs a smash hit with a high percentage of speed, precision, and precision. The hit ball falls in the opponent's game area very quickly, meticulous, hard, and high accuracy making it very difficult to return by the opponent. Unlike the beginner players, his movements are usually less flexible and his punch results are slow, weak, and less accurate. A tennis player like Anton Suseno for example, capable of top spin quickly, hard, and accurately is a skill created not by chance, but because of the ability of mastery of effective and efficient techniques. So, on most new players, it's still difficult to just crossing the ball into the field of opponent game, let alone do the top spin like that done by Anton Suseno.

As mentioned earlier, learning motion skills is part of learning, therefore the notion of learning motion skills is basically not dissimilar to the notion of learning in general. The difference is linked to the emphasis of the material being studied, the processes and conditions of learning, the intensity of the involvement of each domain element, and the learning outcomes.

Many experts have described the study of motion skills, such as Schmidt, Fichman and Oxendine. His view of the study of motion skills has been widely used as a reference by other experts mainly because it has a conceptual representation. According to Schmidt, learning motion skills is a series of processes that influence the exercise or experience that leads to relatively permanent changes in a person's ability to display skilled movements. According to Schmidt's opinion, Fischman and Oxendine cited by Williams assert that, learning motion as an internal process that occurs in the brain's memory system and can not be directly observed, they therefore describe learning motion skills as a set of internal processes that influence exercise or experiences that result in relatively permanent behavioral changes in the form of skilled behavior.

Based on these two views, there are at least three basic characteristics for understanding the learning of motion skills, namely: First, learning motion skills is a set of internal processes that influence the activity of giving practice or experience. The process of learning or experience is a deliberately created process with the aim of mastering new knowledge and skills. The process is developed based on experiences experienced by athletes. Second, because of its internal nature, learning motion skills is not directly observable. As the process progresses, the memory system of the brain receives a number of inputs in the form of motion capabilities and experience, the input is processed, organized, and transformed into a motion pattern of muscles and all processes of change take place without being directly observable, changes that occur through the performance of motion. That's why the learning process that happens is internal. Third, the behavior changes that occur relatively permanent. Athletes are considered to learn if the changes they experienced are relatively permanent, meaning that the results obtained can survive relatively long. Conversely, it is not considered learning if the changes they experienced are temporary and arise due to the process of physical maturity, fatigue factors, illness, drugs, and others. It is only through practice or experience that a relatively permanent change is

achieved, therefore practice or experience becomes very important in the effort to achieve the desired result.

Based on several definitions that have been expressed, the learning of motion skills can be understood as a set of internal processes that lead to behavioral changes, especially relatively permanent motion behavior as a result of the exercise process or experience and not due to the temporal influence of body condition such as sickness, fatigue, because of drugs or physical maturation process.

Referring to this definition, the learning outcomes in the context of learning motion skills can be interpreted as the level of mastery of skills to the purpose of learning motion skills. This level of mastery is measured through a specific test. With other sentences it can be stated that the result of the learning of motion skills is the level of performance of motion skills acquired through the process of measurement according to the type of motion of the learned skill. More specifically in relation to his tennis playing skills, learning outcomes are defined as the level of performance or the level of athlete's mastery of the goal of learning the skills to play table tennis.

## 2.2 The table tennis game

Table tennis is a very unique and creative game, so table tennis is much loved by most of Indonesian society such as kids, teenagers and adults. A table tennis game is a game using table and equipment facilities as well as rackets and balls as a tool. the game begins with the opening blow (service), the ball is reflected on the table itself and then over the net and then bounces at the opposing table, then the ball is hit at the top of the net must bounce to the opposing table until the opponent's table can not return perfectly. The player tries to turn off the opponent's blow to get the number from his blow. From this understanding it can be concluded that table tennis is a game that uses a table to reflect a ball being beaten by a player by using a small ball that must be able to pass or cross the ball and return the ball to the opposing area after bouncing in its own game area. As a result of this, good and correct basic skills are required in addition to being supported by other factors. Table tennis skills include: (a) even around the world. This game uses a racket as a bat and the ball as a hit object, can be played on a closed or open field. The game field is made of rectangular wooden material marked with lines, and is limited by the net to separate between the game area itself and the opposing game area. This game is individual, can be

played one person way against one person or two against two people. Can be played by the male, male, even can also be played by a mixed pair of males and males.

Skill is the ability to produce some results to the maximum with little energy or time and energy. Skills in the sport is the ability to perform the necessary movements and techniques in the sport one is playing and is the basic movement needed in a particular sport. Next According to Lutan; skill is the ability to use one or several techniques appropriately, both in terms of time and situation. According to Saidel, skills is a necessity of motion experience in time-place position change as a result of the development of a person's energy powers that are expended during interaction with the environment. Furthermore Bompá, explains that, techniques cover the overall technical structure and parts of carefully joined and efficient movements of an athlete in his quest to do the sporting task.

The basic skills needed in the game of tennis are: holding a bet, also advanced techniques such as hitting the ball, receiving and doing smash.

"Basically playing table tennis is the ability to apply various skills and technical, physical, and psychic skills in a table tennis game". From this point of view, it can be argued that playing tennis is the ability to perform moves with one or several techniques in the game of tennis exactly, both in terms of time and situation. The basic skills of tennis games that need to be studied in general can be grouped into sections namely; how to hold the racket, stand up, foot movements, and hit the ball. Here are some basic techniques and skills in playing tennis.

## 2.3 The Nature of Motivation Exercise

In general, the term motivation refers to factors and processes intended to encourage people to act or to not act in situations. Motivation comes from the Latin word 'movere' which means to move. Before referring to the notion of motivation, we first examine the identification of the word motive and motivation. Motive is the driving force in a person to perform certain activities, in order to achieve certain goals. Thus, motivation is the impetus in a person to try to make changes in behavior better in meeting their needs.

Sudirman explained that motivation comes from the word 'motive' which is defined as the power of effort that encourages someone to do something. So motivation can be interpreted as a driving force that has become active at certain moments, especially in the need to achieve a very urgent goal. While



Alderman (1974) in Monti P. Satiadarma defines motivation as a tendency to behave selectively to a certain direction controlled by the existence of certain consequences, and that behavior will persist until the goal of behavior can be achieved. The selective nature of behavior means the behavioral individual makes a decision to choose his actions. The specific direction of the behavior means that the action performed has a purpose in accordance with the wishes. As for the consequence is a negative condition that is obtained by an individual if he does not perform his behavior. In Monti P, Satiadarma more simply suggests that motivation is the direction and intensity of one's business. What is meant by the direction of the business is an interesting and intriguing situation so that there is an effort for the person to do so.

The term motivation (motivation) comes from the Latin, which is *moveré* which means to move (to move). Based on the above definition that motivation is a boost from within the self to increase self-actualization. To reach the desired destination or to meet the necessities of life. Furthermore, The context of motivation represents the psychological process leading to the emergence of direction, motivation and persistence of voluntary activities directed towards the achievement of certain goals.

Motivation is a behavioral change process that has been strengthened in the past in the face of failure and trying to improve it. Reveals that motivation is the result of a number of processes that are internal or external to an individual, which leads to an attitude of enthusiasm and persistence in terms of carrying out certain activities. The motivation of the exercise is not in the form of economic necessities that are material, for example in the form of money, but can also be tangible respect and appreciation of the environment, and social status which are all forms of social rewards that are immaterial. One's desired motivation to meet the needs of his life through achievement, talent and itelektual that support the success. The motion (motivating) can be defined as a whole process of motivation of training to subordinates in such a way that humans are willing to practice sincerely in order to achieve organizational goals efficiently. Motivation contains three main components of moving, directing and supporting one's behavior. Moving means generating power to the individual and leading a person to act in a certain way.

Motivation is the desire of someone to achieve something desired, the need for security is required when carrying out the coach, a social needs is a requirement that is shaped into clothing, food and

boards, self-esteem needs a sense of recognition of the exercise environment and society, and self-actualization in improving self potential owned and maximum self-development. Motivation is the encouragement of exercise that arise in a person to behave in reaching expected goals. Motivation is a human impulse that causes acting, speaking and thinking in a certain way, and the behavior that exists in the individual. Exercise motivation is something that raises the spirit or encouragement of a strong exercise and weak motivation of one's exercise to determine the size of achievement.

Basically, according to Singgih motivation comes because there are stimuli from outside the person (extrinsic) and stimuli that arises from within a person (intrinsic). Extrinsic motivation works because there is stimulation from outside a person. For example, someone is encouraged for an appearance goal. Someone feels embarrassed to people because of his body shape that is overweight so they cannot stand the circumstances that he obsessed to lose weight. While intrinsic motivation works because of the encouragement that comes from his own individual, and the training is only as a self-satisfaction. He does not care whether he will get results, praise or not, and the success or failure of the goal for him is not a problem.

With practice there are many kinds of encouragement to do the best that is part of the drive to develop oneself. Sudibyo Setyobroto argues that the motivation of training varies between individuals with each other because of differences in needs and interests, both due to different levels of development of age, interests, coaches and other needs. Motivational exercises for children, teenagers, and parents who are not preparing for the match but for other purposes include: (1) To be able to have fun and get excited. (2) To release psychic tension. (3) To gain an aesthetic experience. (4) To be able to influence with others (make friends). (5) For the benefit of group pride. (6) To maintain a healthy body. (7) For the purposes of practical needs according to his coach. Carl Heyel (in Susilo Martoyo) states, motivation essentially explains that the degree of willingness of an organism to realize its intended purpose. The degree of willingness will then determine the achievement of the goal.

Taking into account the above description, that the need for motivation in various fields of activity is considered very dominant. Similarly, in the field of sports, motivation plays a very important role. However, in the case of providing motivation to the members (members) should pay attention to timing and, the trainer must really understand the

forms of the motivation. Thus expected members (members) are really motivated effectively so there is a willingness to exercise.

Motivation exercises in this study is focused on motivation that encourages a person in the exercise to achieve the needs of practical needs and to maintain a healthy body that is to control and reduce the percentage of body fat. Because excess fat in the body is identical to obesity and can automatically interfere with one's health. The theory of necessity conceptualizes that everyone has the motive of exercise or motive away from exercise. The strength of the two motives is not the same in each member (member) because everyone has different experiences in achieving his goals. A strong / high exercise motive will lead people to approach a situation related to success and vice versa for low / low training will keep the offender on success.

Motivation is an organizational behavior that can not be separated from the need for achievement (needs for achievement), the need for power (needs for power), and the need for affiliation (needs for affiliation). Needs of exercise will encourage one to achieve excellence and achieve the achievement of success, the need for power provide direction to the desired goals of individuals, and the need of affiliated interpersonal will effect one to interact friendly to another.

Maslow's hierarchy of needs (2002), suggests the existence of eight levels of basic human needs. To the eight levels of basic needs is then made into understanding in studying human motivation. As for the eight levels of basic needs are as follows: 1) Physiological needs (physiological needs) this requirement is a basic need that is primary and vital related to basic biological functions of human organisms such as food needs, clothing, boards, physical health, and so on. 2) The need for safety and security needs such as security, protected from danger and disease threat, war, poverty, hunger, unfair treatment, and so forth. 3) Social needs (belongingness and loves needs) include the needs of being loved, calculated as personal, recognized as a member of the group, a sense of loyal friends, cooperation and so on. 4) Esteem needs include the need to be rewarded for achievement, ability, position or status, rank and so forth. 5) The need to understand and develop themselves (need to know and understand) intellectually as the need to enhance the potential possessed, maximum self-development, creativity and self-expression. 6) The need for enjoyment and aesthetic needs such as order and balance. 7) the need for self actualization, such as the need to enhance the potential possessed, maximum

self-development, creativity and self-expression. 8) The need for human existence in influence with God (transcendence needs). Based on the description, it can be concluded that the motivation of the exercise is is a soul impulse that makes a person moved to perform productive actions, both oriented exercises to make money or not. The indicators are as follows: 1) the desire for practice, 2) the growth of the exercise, 3) the creation of conducive conditions and conditions, 4) the availability of rewards, 5) recognition, 6) the need for power, 7) the need to be affiliated, and 8 ) innovative and creative.

## 2.4 The reality of Motor Ability

Basically everyone has a motor ability that is different from each other. According to Wall and Murray, motor ability is the capacity of one's performance in performing the task of motion. While Oxendine suggests that motor ability is a description of one of the skills in performing various basic skills and physical activity as a whole. Furthermore Seidel quotes Singer's opinion that motor ability is indicated as the appearance of a person's own ability to exercise as a basis for performing various motor skills movements.

It can be argued that motor ability is the capacity for the performance of a person's motion skills to perform a variety of motor skills and overall physical activity, or individual capacity that becomes the determinant of individual performance potential to display specific skills. Therefore, motor ability in this context can be understood as an ability that is specifically related to the appearance of a motion skill. More specific motor abilities are a number of abilities that underlie learning motion skills and performance success.

Revealed from these, several views about the influence of biological factors as the main force supporting the motor ability. The point is, motor ability is considered as a potential ability that supports certain skills. Motor ability is then the role as a foundation for the development of skills and in turn play a role in implementing various sports skills. In other words, motor ability is an innate ability that is different in each person, not easily changed through practice and experience, develops relatively automatically in the process of growth and maturity, is relatively lasting, and underlies the formation of skills.

Magill further quotes Fleishman's opinion that suggests, motor ability is a general capacity to perform various tasks of motion, or a description of one of the skills in performing various basic skills and

activities as a whole. This capacity is a combination of biological and environmental factors. Nevertheless biological factors are considered as the main supporters of motion. Aspects of motor abilities possessed by a person is very diverse and different potential of each person. Therefore, experts have attempted to categorize aspects of these aspects. Among them, Clarke & Clarke mentions that there are eight aspects of motor abilities are; muscle strength, muscle and cardiovascular endurance, speed, agility, balance, muscle power, eye-hand and foot coordination. Singer further mentioned, there are four components that directly affect motor ability and ability of the ability of coordination, balance, velocity, and kinestetik.

In regards to the categorization above, Magill argues that there are two hypotheses developed about the influence between aspects of motor ability, which are: motor ability hypothesis in general and motor ability special. The first hypothesis considers the motor ability aspect as a whole. Each aspect relates to one another to influence the success of learning or the performance of motion. This hypothesis predicts that if one is good in one motor skill, then he or she is potentially to be good at all motion skills. In contrast to a special motor ability hypothesis, every aspect of motor ability with each other is independent or independent. That is, if a person is good in the aspect of balance ability, then it is unpredictable that the person will be good also in the ability of the reaction time.

Considering some of these categorizations, the authors assume, there are five aspects of motor abilities that underlie all aspects of motor ability of the individual, especially in relation to his playing skills of tennis. These five aspects are coordination, agility, balance, speed, and reaction time.

Furthermore, to know athletes' motor ability, then do the measurement. In accordance with the characteristics of research subjects, the type of test used is a motor ability test for elementary school age children developed by Arnhem and Sinclair. This test is intended to measure the ability of athletes to display motor abilities and overall physical activity gained from the experience of motion in childhood.

The following is the type of motor ability test for children, consisting of seven items:

- (a) Throw on target or target (target throwing);
- (b) Backgroup and backstrength (back and hamstring stretch);
- (c) Skip forward without prefix (standing long jump);
- (d) Face down to standing;

- (e) Push-up on chair (chair push-up)
- (f) Status balance (static balance)
- (g) Agility run (agility run).

### 3 METHODS

The general objective of this research is to know the effect of exercise motivation and motor ability on the learning achievement of tennis skill in male junior athletes conducted at Family Club Tennis Club of PTMSI member of Cianjur regency.

The variables in this study are two independent variables that become the scope of research subjects, in which are exercise motivation variables and motor ability, while the dependent variable used in this study is the skills of playing table tennis. Specifically the purpose of this study as follows: 1) To find out how the influence of motivation of exercise on the results of playing skills at the junior athletes Cianjur. 2) To know how motor ability influence to learning result of playing skill of tennis to male junior athletes. 3) To know the difference of influence between motivation of exercise, and motor ability to the result of learning skill of playing tennis on male junior athletes.

This research was conducted at tennis club Family Cianjur member PTMSI Kabupaten Cianjur. The research period lasted for five months with activities including testing of research instruments, initial data collection for grouping samples, and final data retrieval, data processing, and reporting.

#### 3.1 Research method

Research method used in this research is ex post facto method with correlational techniques.

Kerlinger (1993) in Sugiyono (2004) defines ex post facto research as an empirical finding that is done systematically, the researcher does not control the independent variables because the manifestation has occurred or the variables are inherently unmanipulated. To obtain the desired data in the field, this study uses questionnaires prepared based on indicators. The data needed in this research is data about exercise motivation (X1), motor skills (X2), and table tennis (Y) skills.

The author uses research design by grouping research variables as follows:

- a. Independent variable (X1) exercise motivation
- b. Independent variables (X2) motor ability
- c. Dependent variable (Y) Skill of playing table tennis

Constellation Relationship between Independent Variables, X1 and X2 with Dependent Variables, Y

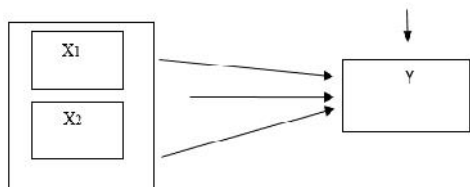
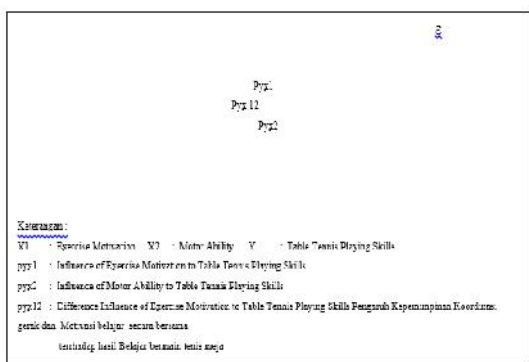


Figure 1: Research Design.

### 3.2 Data Analysis Technique

The data obtained in this study will be processed and analyzed using variance analysis technique (ANOVA) followed by using lisrel (path analysis). And testing is done at the level of significance = 0.05.

The measuring instrument used in this study is a questionnaire to determine the level of athletes' motivation and motor skills test. Meanwhile, to measure the results of the playing skills of table tennis can be seen from the raw value obtained by athletes during the test of table tennis skills.

After the preparation of questionnaire motivation exercise, then tested to respondents who have the same characteristics with the sample to be studied. Data from the test results, then processed and analyzed to determine the degree of validity and reliability

## 4 RESULTS AND DISCUSSION

### 4.1 Processing Results and Hypothesis Testing

The data needed for testing the research hypothesis is as follows:

Result of Calculation of Correlation Coefficiency Significance

Table 1: Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.629 <sub>a</sub>	.396	.362	5.28528	1.818
2	.724 <sub>a</sub>	.524	.498	4.69076	2.141

- a. Predictors: (Constant), X1
- b. Predictors: (Constant), X2
- c. Dependent Variable: y

Referring to the result of calculating the significance of the correlation coefficient as shown in the table, the following conclusions can be drawn:

1. The Effect of Motivation Exercise on table tennis skills. From the data it can be concluded that there is a significant influence Motivation exercise on table tennis skills, contributed 39.6%.
2. Influence motor ability against table tennis skill. Furthermore, from the data obtained information that the motor abilities contribute to table tennis skills of 52.4

Table 2: Calculation Result of Significance of Coefficient X1, X2 on Y.

**ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	440.270	2	220.135	9.548	.002 <sup>b</sup>
Residual	391.930	17	23.055		
Total	832.200	19			

- a. Dependent Variable: y
- b. Predictors: (Constant), X2, X1

Referring to the result of counting the significance of double correlation coefficient as shown in the table, the following conclusions can be drawn:

3. The same effect between exercise motivation and motor ability against table tennis skills.

Ho: There is no significant influence between exercise motivation and motor ability together with table tennis skills.

H1: There is a significant influence of exercise motivation and motor ability together with motor ability against table tennis skill.

The level of significance = 0.05, and the criteria of significance testing are:

If  $F_{count} > F_{table}$ , then  $H_0$  is accepted and other things are rejected. It turns out that  $9.55 > 3.44$



then  $F_{count} > F_{table}$  so  $H_0$  is rejected or  $H_1$  is accepted (correlation significant).

In conclusion: There is a significant influence of exercise motivation and motor ability together with Table Tennis Skills.

Table 3: Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.727 <sup>a</sup>	.529	.474	4.80153	2.172

a. Predictors: (Constant), X2, X1

b. Dependent Variable: y

Furthermore, the results of this study obtained the contribution of the motivation of exercise and motor ability is as much as 52.9% together with the table tennis skills.

## 4.2 Discussion on Findings

After analysis with data obtained through statistical approach, it can be obtained picture as follows:

- a. The influence of exercise motivation on table tennis skill.

Based on the results of data processing and score analysis between the motivation of exercise on table tennis skill, the results obtained that there is a real correlation of 0.47, is evidenced by the results of the scale of motivation of youth athlete training PTM Family to table tennis skills of 0.39.

- b. Ability to table tennis

From the processing and analysis of motor ability data with table tennis skills, obtained the result that there is a correlation of 0,52. It turns out that the motor ability level provides a significant correlation or positive support for table tennis skills. This is in line with previous theories, that table tennis skills are better when supported by a high level of motor ability.

- c. The influence of exercise motivation and motor ability against table tennis skill.

Based on the results of data processing and score analysis between exercise motivation and motor ability to table tennis skill, the results obtained that there is a real correlation of 0.53, is evidenced by the results of exercise motivation scale and motor ability junior athlete PTM Family against table tennis skills tend to be high. This is in line with the theory that explains that: "the results of the exercise will be

optimal, if there is motivation. The more appropriate the motivation is, the more likely it is to succeed". Similarly, the motor ability, it turns out the level of motor ability to provide positive support for table tennis skills. This is in line with previous theories, that table tennis skills are better when supported by a high level of motor ability

## 5 CONCLUSION

Based on the data processing and discussion can be obtained the following conclusions:

1. There is a significant effect of exercise motivation on table tennis skill on junior athletes of PTM Family Cianjur.
2. There is a significant influence motor ability on table tennis skill on junior athletes of PTM Family Cianjur.
3. There is a significant influence of exercise motivation and motor ability together with table tennis skill at junior athletes of PTM Family Cianjur

As a result of the research that the author did, the authors want to put forward the following suggestions:

1. For athletes, in order to keep trying to improve the motivation of exercise so that the achievement of the results of exercise and table tennis skills better can be realized, especially if supported by motor ability with a diligent practice so that the achievement of results towards a better can be achieved.
2. For the coach, if he wants his athlete to get good table tennis skills, to always provide training materials to pay more attention to his training motivation and give encouragement to athletes for more vigorous exercise.
3. For future researchers, it is expected to continue the research with a wider coverage again because the authors feel there are still many shortcomings in this study.

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