

Comparison Between The Combination Of Three Steps Rhythm Training And Alternating Phase With Dead Leg And Mini Hurdles Progression Exercise Combinations To Running Speed And Accuracy Through Gawang Kanga's Escape

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Abstract

Kids athletics is a type of child sports designed in such a way based on the study of sports science so that it can support all biomotor components that support physical fitness. The purpose of this study was to determine the difference between the results of a combination of three-step rhythm and alternating phase training with a combination of dead leg training and mini hurdles progression to the speed and accuracy of Kanga's Escape. The experimental method aims to compare 2 training methods for Dead Leg and Mini Hurdles Progression Training with Three Steps Rhythm and Alternating Phase Exercises on Running Speed and Accuracy of Passing Kanga's Escape Goal. The division into two groups was obtained from the results of matching the average scores of the subjects from the initial test so that the two groups departed from the same starting point. The measurement scale in this study is a numerical scale, so the data normality test must be done first with a significance level of 5%. The data normality test used was Shapiro-Wilk because the number of samples was less than 50. The results showed that there was a big difference in the combination of Dead Leg Training and Mini Hurdles Progression with Three Steps Rhythm and Alternating Phase Exercises on the Running Speed and Accuracy of Passing the Kanga's Escape Goal. Seeing the results of the data, it shows that the Three Steps Rhythm and Alternating Phase training method shows a value of at least 0.082 sig from the data for the Dead Leg and Mini Hurdles Progression Exercise method of 0.134 sig. In the P test, 14% and 86% of the data are 11% and 32%, while in the homogeneous test the data shows homogeneity than the Dead Leg Training Method and Mini Hurdles Progression. So this research tends to be better off using the Three Steps Rhythm and Alternating Phase training method. The conclusion above shows that there is an effect in the combination of Dead Leg and Mini Hurdles Progression training with Three Steps Rhythm and Alternating Phase Exercises on the Running Speed and Accuracy of Passing the Kanga's Escape Goal which has a better tendency to use a combination of Three Steps Rhythm and Alternating Phase exercises to achieve an increase. significant or good.

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INTRODUCTION

The approach to playing by running with a bracelet and bowl is a method that will be used in an effort to increase the run of 60 students, because playing is fun, by playing students do not feel tired and aiming for students to play the game to stay focused on the model applied, so that the purpose of learning can be achieved. Sujiono (2010: 144) states that playing is "as a means of socialization, it is hoped that through play it can provide opportunities for children to explore, discover, express feelings, be creative and learn in a fun way". Meanwhile, the purpose of the play activity program is to help lay the foundation towards the development of the attitude of knowledge, skills and creativity needed by children to be able to adapt to their environment and for growth and development at the next stage (Siswoyo, 2017: 155).

In order for character education to achieve the expected goals, character education must be delivered through the world of education. In line with the statement. Ali Maksum (2008: 133) says that: Character building is most appropriate in schools for three reasons: 1). Some students know physical education at school. 2). School age is an effective period to instill values. 3). Physical education learning in schools still emphasizes achievement (Soedjatmiko, 2015: 59).

One of the ways to build national character is through sports. With sports, we can develop national character, sportsmanship and at the same time strengthen national unity. On this basis, all components of the nation must contribute to advancing national sports. According to Irwan Prayitno (2008), normatively and as has been almost accepted by all of us, the formation of national character is very important for the younger generation and even determines the fate of the nation in the future (yuliawan, 2016: 104).

Training is a process of systematically programmed physical training, carried out repeatedly with the load increasing gradually, so that it has the goal of improving body organ function, and to prepare athletes at the highest level of performance (KancaI Nyoman, 2004: 49) (in the Journal Udiyana, 2014: 2).

Permendiknas Number 22 and 23 of 2006 relating to aspects of physical prowess includes physical fitness, agility, speed and reaction time, flexibility, accuracy, reactions, , balance, coordination, explosive power, anthropometry (anthropometric: body build and body composition) (in the journal Wiranata, 2017: 51).

Efforts to improve students' mastery of movement skills in various sports activities contained in the curriculum because one of the specific goals of sports and health education at all levels of education is the complete achievement of competency standards and basic competencies (Rewo, 2017: 2).

Athletics is a sport in which every movement uses physical or physical activity, where in doing so all members of the body will move, be it feet, hands or other limbs. In athletics, there are several numbers, namely running, jumping, throwing. Running numbers consist of sprinting, medium-long distance running, relay running, obstacle course and hurdling.

Kids athletics is a set of tools intended for children's sports activities. Kids athletics aims to fulfill children's interests in movement activities, introduce the basics of athletic movements in the form of games, stimulate growth and physical development and maintain health and avoid boredom in children (Hindiani, 2018: 24).

The learning process starts from students' interest in studying at school which can provide opportunities for how to respect others with good values and attitudes (Astuti, 2017: 80).

Bompa (Harsono: 1988) states that: The principle of multilateral development is

based on the fact that there is always interdependence (interdependence) between all organs and systems of the human body, and between physiological and psychological processes. All changes in our bodies after some physical activity always adhere to this principle of interdependence. A form of exercise always demands harmonious cooperation of several systems and organs of the body, as well as various biomotor and psychological abilities (in the journal Akbaruddin, A. 2018: 76-77).

The ability of a hurdle runner is identical when an athlete runs as fast as possible with the right rhythm of steps through hurdles without reducing the speed to the finish line. The application of appropriate training methods is one of the important factors to increase physical capacity so as to be able to carry out exercises that lead to explosive movement techniques such as the ability of the muscles of the legs, hips, back and shoulders and other components of movement skills (Amirzan, 2019: 2).

In playing, children are generally involved in a game. Misbach (2006: 5) concluded that a game is a play situation associated with certain rules or goals, which results in activities in the form of purposeful actions. Thus, it can be understood that in playing there are activities that are tied to rules to achieve certain goals (Nur, 2013: 90).

The ability to perform physical movements and actions for a child is related to self-confidence and self-concept formation. Therefore gross motor development is as important as other aspects of development for early childhood. Primary school education curriculum instills cognitive, psychomotor, and affective aspects in an integrated manner through a thematic learning system. The formal level in elementary school is one of the means of optimizing children's growth and development, by providing benefits for preparing children to enter the next level in junior high school (Burhaein, 2017: 52).

The characteristics of elementary school age children are related to physical

activity, namely that generally children like to play, like to move, like to work in groups, and enjoy direct practice (Abdul Alim, 2009: 82).

Running is a physical activity that children often do. It is one of the basic movements that children learn along with other basic movements that are important for child development. However, if the child learns running more intensively the children will feel bored and tired. For this reason, the trainer must create a form of running training into a combination of various motions (multilateral) or package games with interesting tools so that children are challenged to take sprint training according to the character of the child's age and physical abilities (Nurulfa, R. 2017 : 39).

Running the 100 meter sprint is an ability characterized by the process of rapidly moving the body from one place to another. Thus to produce a fast run, the things that need to be considered are: the posture of the body is leaning forward, the footsteps must be longer, the swing of the hand must be in accordance with the movement of the leg and the movement of the arm where the fingers are clenched or opened tightly and relaxed. This is so that the maximum speed can be achieved until the finish line (Sartono, 2018) (in the journal Henjilito, R., 2019: 100).

According to Ad'dien (2010, p. 24) sprinting is a running competition, where all participants run at full speed along the distance that must be covered. Meanwhile, according to Sumarya and Suwarso (2007, p. 7) argued that "Running is a movement of moving the right and left legs alternately." Running itself is a basic human movement that has been done in everyday human life. Running is one of the athletic branches that are always contested in every sporting event. Running itself has been divided into three parts, including short distance running (sprint), medium distance running and long distance running. In addition there are also other running numbers, namely relay runs and hurdles. According to Naspe (in Jenny & Armstrong, 2015, p. 84) states that "brisk

walking and running are moderate physical activities that can be done with a relatively long duration" (in the journal Irafani, 2018: 342).

The objectives of this study were to: determine the effect of a combination of dead leg training and mini hurdles progression on the speed and accuracy of Kanga's Escape. Knowing the effect of a combination of three-step rhythm training and the alternating phase on the speed and accuracy of Kanga's Escape.

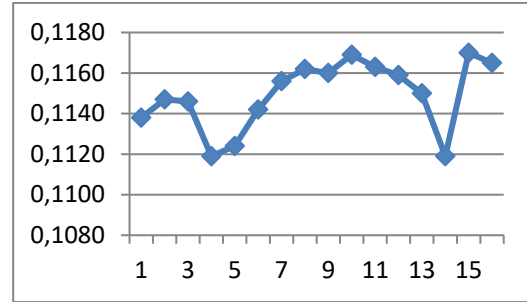
METHOD

This research was conducted using an experimental method that aims to find the effect of a combination treatment of three steps rhythm and alternating phase training with a combination of dead leg training and mini hurdles progression on the speed and accuracy of Kanga's Escape in controlled conditions, the research procedure with observation, tests and tools. Data sources and research subjects in this study are at Club Cristal Athletic. The data analysis technique uses the prerequisite test: Normality, Hypothesis and Probability. This data analysis technique uses statistical analysis method which is used to see the effect between two or more variables. This variable relationship is functional which is manifested in a mathematical model.

RESULTS AND DISCUSSION

The Effect of Combination of Dead Leg Training and Mini Hurdles Progression on Running Speed and Accuracy Normalitas.

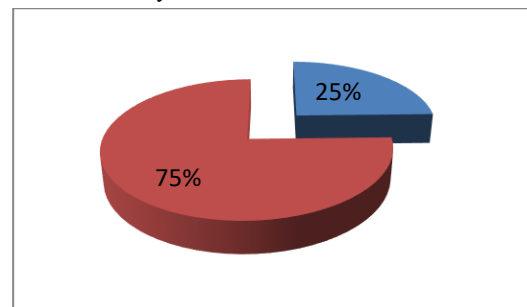
Figure 1. Normalitas Dead Leg Training and Mini Hurdles Progression on Running Speed and Accuracy Normalitas



The sig value > 0.05, can be said to be abnormal if the sig value < 0.05. The data above shows that the Shapiro Wilk column is the sig value for Dead Leg and Mini Hurdles Progression for speed and accuracy with a value of 0.134 at the sig value. The data above can be said to be Normal.

The graph above also shows an increase and decrease in students but in reality there is a significant increase in the retrieval process.

Figure 2. Probabilitas Dead Leg Training and Mini Hurdles Progression on Running Speed and Accuracy Normalitas



Speed in Dead Leg Training and Mini Hurdles Progression by 0.106 or 25%. The calculation of accuracy in Dead Leg and Mini Hurdles Progression exercises the probability value is the Probability value of 1.00, so it can be concluded that the probability value is 100%. Judging from the data above shows that $(0.594 / 1.839) = 0.323$. It is concluded that the Accuracy of Dead Leg Training and Mini Hurdles Progression is 0.323 or 75%. Judging from the graph the probability of different results in the data, the problem in accuracy reaches 75% more than the problem in Speed.

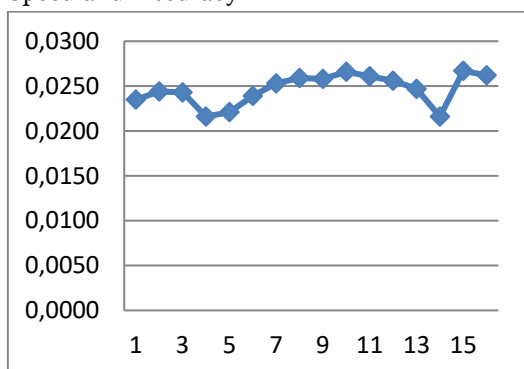
Figure 3. Homogen Dead Leg Training and Mini Hurdles Progression on Running Speed and AccuracyNormalitas

Varians Dead	2,92663E-06
Varians Tree	
F-hitung	0,988496419
db-Pembilang (vb):n-1	15
db-Penyebut (vk):n-1	15
taraf Signifikasi	0,05
F-table	3,37
Kesimpulan	Tidak Homogen

Judging from the table above, the Dead Leg and Mini Hurdles Progression data are not homogeneous.

Pengaruh Effect of Combined Three Steps Rhythm Exercise and Alternating Phase on Running Speed and Accuracy.

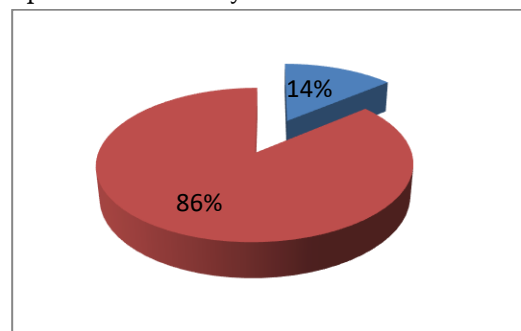
Figure 4. Normalitas Three Steps Rhythm Exercise and Alternating Phase on Running Speed and Accuracy



The sig value > 0.05, can be said to be abnormal if the sig value < 0.05. The data above shows that the Shapiro Wilk column is the sig value in the Three Steps Rhythm and Alternating Phase Exercise for speed and accuracy with a value of 0.082 at the sig value. The data above can be said to be Normal.

The graph on nomality shows that there is stability in the significant data results, there is no significant decrease or increase. It's just that all data has achieved a good increase.

Figure 5. Probabilitas Three Steps Rhythm Exercise and Alternating Phase on Running Speed and Accuracy



The speed of the Three Steps Rhythm and Alternating Phase Exercise is 0.138 or 14%. Calculation of the accuracy in the Three Steps Rhythm and Alternating Phase exercise, the probability value is the probability value of 1.00, so it can be concluded that the probability value is 100%. Judging from the data above shows that $\left(\frac{1,2447}{1,4448}\right) = 0,862$. It can be concluded that the accuracy of the Three Steps Rhythm and Alternating Phase Exercise is 0.862 or 86%.

Seen in the graph shows that there are different problems so that it shows almost an increase that is close to good achievement.

Figure 6. Homogenitas Three Steps Rhythm Exercise and Alternating Phase on Running Speed and Accuracy

Varians Dead	2,92663E-06	
Varians Tree		2,92663E-06
F-hitung	0,988496419	
db-Pembilang (vb):n-1	15	
db-Penyebut (vk):n-1	15	
taraf Signifikasi	0,05	0,01
F-table	3,37	3,37
Kesimpulan	Tidak Homogen	Homogen

The data from the Three Steps Rhythm and Alternating Phase variants show with the condition that it is said to be homogeneous if the F-count data > F-table then the data is not homogeneous, if the data shows F-count <= F-table then the data is Homogeneous.

DISCUSSION

Based on hypothesis testing to find out 2 differences in the effect of training methods between (1) Dead Leg Training Combination and Mini Hurdles Progression on Running Speed and Accuracy (2) Combination of Three Steps Rhythm Exercise and Alternating Phase on Running Speed and Accuracy. This cleansing results in an analysis which can be further explained as follows:

The Effect of Combination of Dead Leg Training and Mini Hurdles Progression on Running Speed and Accuracy

The speed of one of the biomotor components needed for each sport. Every sports activity, whether it is a game, a race or a competition, always requires a biomotor component of speed. For that speed is one of the basic biomotor elements that must be trained in an effort to support the achievement of sportsmen's achievements. In general, speed training is carried out after the athlete has been trained in endurance and strength. This is in accordance with the training pyramid, that speed training is carried out after the athlete is trained in endurance or has an adequate aerobic foundation, followed by training on anaerobic excitability threshold skills, and good anaerobic abilities, then speed training (Sukadiyanto, 2011) (in the journal Nuryadi, 2018: 65).

The training method using Dead Leg and Mini Hurdles Progression requires special training for elementary school athletes and the need for an extra training program to be able to achieve results that are on target and even exceed target limits. Seeing the results of observations made by collaborators showed that the Canga Escape learning activity through "basic athletic movement coordination training for running numbers" could go as planned and in the end all students completed 100% (Wachrudin: 2012). The small-scale test of the two teams reached a time that was very far from the initial target

of 0.20.45 and 0.22.01. Many factors that influence the implementation of the Dead Leg and Mini Hurdles Progression combination training method do not yet fully understand this game, nor do they yet. get used to this series of movements. That is what makes the achievement factor in the target set by the coach. Trainers who will improve the performance of kids athletics should pay attention to important factors, such as physical fitness. The form of attention can be in the form of providing understanding or knowledge about physical fitness with various forms of exercise again (Galuh: 2013).

The next trial of the Dead Leg and Mini Hurdles Progression combination practice is enough to make changes in athlete's results even though they haven't met the expected target. But at least there are small changes that make this training method have little effect on the speed and accuracy of the Kanga escape game. The conclusion is that the Dead Leg and Mini Hurdles Progression combination training method does not have a big influence on this game so this method needs to be modified again to make it feasible so that the Dead Leg and Mini Hurdles Progression combination training method can be an effect.

Discussion on the Combination of Three Steps Rhythm Exercise and Alternating Phase on Running Speed and Accuracy

The training method of Combining Three Steps Rhythm and Alternating Phase Exercise on Running Speed and Accuracy in the first trial had quite an effect on kang'a escape play with the influence on the athlete's leg muscles which made them stronger and ready to accelerate and accelerate in running. Running is the frequency of steps that are accelerated so that when running there is a tendency for the body to float, which means that when running the two feet do not touch the ground at least one foot remains on the ground, running is an activity of swinging both legs with a very fast motion. When we run, there are times when our feet do not fully

touch the ground, as if we are floating in the air (Djumidar 2003: 5) (Muhajirin, 2016).

The research test follows that the Three Steps Rhythm and Alternating Phase Combination training method has a very significant effect on changes in the speed and speed of students in performing the kang'a escape movement series with an average result in taking 16-17 minutes for each student, so this method worthy of use in training.

CONCLUSION

Based on the results of this study, it shows that: 1) There is an influence on the combination of Dead Leg and Mini Hurdles Progression Exercises on the speed and accuracy of the kanga escape movement activities. In the normality test, there are significant or unstable increases and decreases so that there is no stable achievement of children. Whereas in the probability there is a slight difference as much as 25% and 74% so there is no good increase. And the homogeneity test shows that the data are not homogeneous. 2) There is influence on the combination of Three Steps Rhythm Exercise and Alternating Phase on the Running Speed and Accuracy of Passing the Kanga's Escape Goal. Seeing the results of the data, it shows that the Three Steps Rhythm and Alternating Phase training method shows a value of at least 0.082 sig from the data for the Dead Leg and Mini Hurdles Progression Exercise method of 0.134 sig. In the P test 14% and 86% of the data are 11% and 32%, while in the homogeneous test the data shows homogeneity.

Based on the research results, the most effective way to increase speed and accuracy is that the combination of Three Steps Rhythm and Alternating Phase exercises has a good and even improvement in clubs.

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