The Effect of Engklek on Improved Balance in Fourth Grade Children at Kiyonten State Elementary School 1

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ABSTRACT
This study is to determine whether there is an effect of traditional sports on increasing dynamic balance in grade IV Kiyonten 1 State Elementary School children. The design of this research is pre-experimental with one group pre-test – post-test design. This research instrument with observation and in the form of a test Modified Bass Test of Dynamic Balance. This study will use descriptive statistical data analysis techniques and analyze them with the application of SPSS (statistical product and service solutions) IBM 25, which is to test for normality and test for homogeneity. When the data is normal, it can be continued to Test – T. After being tested for normality, it turns out that the results are not normal (rejected), therefore the search for hypotheses can be done with Statistics Non-Parametric or exact Test Wilcoxon, that Asymp. sig (2-tailed) is worth 0.001. Because the value is 0.001 pretest with post-test, it can be said that there is an effect of using treatment engklek traditional exercise on improving dynamic balance in grade IV SD N Kiyonten 1. So the study experienced an 11% increase in dynamic balance.

Keywords: Traditional sports; Dynamic Balance; Treatment.

INTRODUCTION

In ancient times there have been games that are often played by the people, these traditional games are Indonesian cultural assets that have physical benefits when played. This game that has been around for a long time needs to be preserved because it is very fun, entertaining, has social value, and can improve the physical quality of the players. This game can also make the body fitter, and healthier and can also provide moral values to each player of the traditional game (Dwi Handoko, 2021). While in research Games which already there before games modern appear and join Becomes partofm every thnic group nation in Indonesia is game traditional. As for benefit from Sport traditional crank that there is three that is (1) Game this the in gredients
many which utilise from environment around like from plant, soil, fractions critical, fractions stone, and etc, so from that need existence creativity and imagination which tall. (2) Game this many need player which many so that arise interaction from fellow child. (3) on game which there is since era formerly many contained score sublime and message morals in in game like togetherness, cooperation, honesty, attitude sporty, and obey to regulation which already agreed (Rozana et al. 2020) . in the journal (Komang Trisna Mardayani, Luh Putu Putri Mahadewi et al., 2016) state Engkle Sports that is sport traditional which method play it with lift one the legs in language answer called "crank" and which normal play it that woman, but man even also can play it and amount player usually 2 until 5 player and also can more from that. Game this no need the place which large, however in page house even also can origin the place play it flat. Sport traditional this have many benefit that is (1) make child becomes happy, (2) refreshing body child (3) increase motor Rough child, (4) make Skills hand child more good, (5) make child obey regulation which apply, (6) increase socialization child to friend play it, (7) increase ability child to (Tiara et al., 2014). 

For Balance in journal (Kuncoro, 2017) states that the notion of balance or balance, widely interpreted in several fields of science, for example in economics about market balance, geology about ecosystem balance, and so on. Balance in sports is a person's skill in maintaining his physical condition. Which meant dynamic balance of the body used in this study is something ability body defend equilibrium when in position move. According to (Pratiwi, 2019) factor which influence balance there is seven as following (1) dotted on center gravity, existence factor line gravity (3) factored on point pedestal, (4) on endurance muscle (6) factor Among man and woman, (7) Age . Period child which currently have education in school base usually many move dynamic increase knowledge along increase age, variety Skills which mastered, and all that useful for process progress later (Kusumawardhani, 2016).

From background behind in on could interpreted that study this working for researching influence sport traditional crank to enhancement balance dynamic on class IV child school base. If proven with crank this could increase balance dynamic on child school base, so from that study this very important existence, because for educate Public large that sport/game which already there is since era formerly very important for increase balanced child specifically balance dynamic. Output from knowing that expected sport traditional this could permanent sustainable played by various generation later.
METHOD

The design of this research is pre-experimental with one group pre-test – post test design. The design is a design that accompanies the initial test and the final test for the treatment which are given. The sample in this study was class IV at the Kiyonten 1 State Elementary School, which amounted to 16 students and the sampling technique was taken by taking all samples or saturated sampling. This research instrument with observation and in the form of a test Modified Bass Test of Dynamic Balance. Analysis data use technique descriptive statistics and analyzed with application SPSS (statistical product and service solutions) IBM 25, which where for test normality and test homogeneity. When data that character normal could next to Test – T.

Table 1.
Design Study

<table>
<thead>
<tr>
<th>Pretest</th>
<th>Treatment</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>O₁</td>
<td>X</td>
<td>O₂</td>
</tr>
</tbody>
</table>

Information:
O₁ : pre-test (pre-test) before the treatment is given
O₂ : final test (post-test) after the treatment is given
X : treatment of the experimental group by applying a problem-based learning model.

RESULTS AND DISCUSSION

Table 2.
Descriptive Analysis of Pretest and Posttest Statistics

<table>
<thead>
<tr>
<th>Name</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Delta (difference)</th>
</tr>
</thead>
<tbody>
<tr>
<td>APR</td>
<td>70</td>
<td>85</td>
<td>15</td>
</tr>
<tr>
<td>AS</td>
<td>60</td>
<td>70</td>
<td>10</td>
</tr>
<tr>
<td>ANS</td>
<td>70</td>
<td>70</td>
<td>0</td>
</tr>
<tr>
<td>AOP</td>
<td>60</td>
<td>65</td>
<td>5</td>
</tr>
<tr>
<td>DEO</td>
<td>70</td>
<td>70</td>
<td>0</td>
</tr>
<tr>
<td>FAA</td>
<td>30</td>
<td>50</td>
<td>20</td>
</tr>
<tr>
<td>FDA</td>
<td>70</td>
<td>70</td>
<td>0</td>
</tr>
<tr>
<td>IWO</td>
<td>75</td>
<td>80</td>
<td>5</td>
</tr>
<tr>
<td>JH</td>
<td>60</td>
<td>70</td>
<td>10</td>
</tr>
<tr>
<td>MA</td>
<td>20</td>
<td>25</td>
<td>5</td>
</tr>
<tr>
<td>RSA</td>
<td>70</td>
<td>75</td>
<td>5</td>
</tr>
<tr>
<td>RAC</td>
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<td>REP</td>
<td>70</td>
<td>95</td>
<td>20</td>
</tr>
<tr>
<td>R</td>
<td>30</td>
<td>70</td>
<td>40</td>
</tr>
<tr>
<td>SR</td>
<td>55</td>
<td>60</td>
<td>5</td>
</tr>
<tr>
<td>Mean</td>
<td>58,44</td>
<td>68,44</td>
<td>10</td>
</tr>
</tbody>
</table>

In the table above, it can be seen that there was an increase in balance after being treated with the traditional exercise, seen from the mean score of the pretest, which was
58.44 and the mean score of the posttest was 68.44. The difference between the mean pretest and posttest is 10.

Table 3. Normality Test Results

<table>
<thead>
<tr>
<th></th>
<th>Kolmogorov-Smirnov</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sig.</td>
<td>Sig.</td>
</tr>
<tr>
<td>Pretest Score</td>
<td>.001</td>
<td>Abnormal</td>
</tr>
<tr>
<td>Posttest Score</td>
<td>.001</td>
<td>Normal</td>
</tr>
</tbody>
</table>

Table the show that Sig. of the variables tend to be dominated below 0.05 so could concluded that sample in on population no normal or rejected. Could taken conclusion that study next must use technique non-parametric statistical research (Wilcoxon test), because if use test t not relevant, because condition test t is test normality state distribute normal (received) whereas test normality in on show distribute no normal (rejected) so from that, technique analysis data for determine hypothesis must use Statistics Non-Parametric or specifically is Test Wilcoxon.

Table 4. Wilcoxon Test Results

<table>
<thead>
<tr>
<th>Pretest dengan postest</th>
<th>Asymp. Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.001</td>
</tr>
</tbody>
</table>

From the results SPSS IBM 25 di on, could see that Asymp. sig (2-tailed) 0.001. Because 0.001 so, Ho rejected and Ha received, which means there is difference Among results from pretest with posttest, so that could said there is an influence use treatment sport traditional crank to enhancement balance dynamic on class IV SD Negeri Kiyonten 1 Subdistrict Kasreman From an average of 58.44 (results Pretest) and 68.44 (results Posttest) could conclude sport traditional crank give effect more good as big as 11% compared to before given treatment Sport Traditional knock.

School Base Country Kiyonten 1 in Village Kiyonten, Subdistrict Kasreman, Regency Ngawi, Java East which were focus from the researcher is focused on class IV just which amount 16 students and on research this technique taking the sample use sampling fed up which it means taken Becomes sample that is the whole population from class the. Data balance dynamic student the taken with test balance dynamic where before conducted treatment held pretest test balance dynamic more formerly for knowing how much far balance student class IV before enforced treatment crank. After the existence pretest the student class IV new given treatment sport traditional crank During 16 meeting. Final time held posttest test balance dynamic for measure there is whether or not influence after given treatment sport traditional crank the.
Based on the results of the analysis descriptive the obtained score mean from pretest as big as 58.44 and posttest 68.44, then next test normality which where results from test Kolmogorov-Smirnov and Shapiro-Wilk show more dominant Sig. under 0.05 yang where it means test normality rejected, so for future must next with Statistics Non-Parametric and which more appropriate is Test Wilcoxon because same like data that researched that is in pairs each other relate. Results from Wilcoxon's test showed that the yoke game could provide Thing positive for increasing the dynamic balance of fourth-grade students of SD Negeri Kiyonten 1, could see that Asymp. sig (2-tailed) 0.001. Because 0.001 so, Ho rejected and Ha received, which means there is difference Between results pretest with posttest, so that could said there is an influence use treatment sport traditional crank to enhancement balance dynamic on class IV SD N Kiyonten 1. Results this strengthened also from a study which title Influence Game Traditional knock To Balance Static and Dynamic on Children Age 6-12 Year in Environment field Rivet Ward Banyuning Buleleng the get significance 0.000 with significance (2-tailed) not enough from 0.05. So, Ho rejected and Ha received, which means there is an influence balance dynamic on children age 6-12 year (Agus et al., 2022). From results statistics descriptive in on could concluded average results Pretest 58.44 and average results Posttest 68.44 could concluded that sport traditional crank give effect more good as big as 11% compared to before given treatment Sport Traditional knock.

On era formerly Public Indonesia already play game, which now more known game traditional and have characteristics culture as well as also Becomes enhancement fitness body. Game this very favorite by Public specifically children as game just with only look for enjoyment only nor as event race. As for the benefits for increase interaction social with fellow child which play (Alaska & Hakim, 2021). Sunda Manda or often called crank in in game this there is movement jump which could working increase motor Rough child school base, because game the move use muscles big. Muscle big the useful move body child so that can move from the place one to the place others who want to aimed at. Muscle the useful for jump and realize balance body so that could stable when move. Game seen from method play it is game which simple because method play it with only jump in on field flat which already drawn pattern crank. Game this simple and pleasant (Sholikan, Kurnia Fandy Achmad Sudijandoko, 2019). Game traditional crank very important also to health body, component physique which healthy really important and needed by a athlete,
if achievement want to more good again. Because aspect that very important existence for development aspect which apply on enhancement physique a athlete. Need is known development physique the no only only for para athlete, however important also for guard fitness and health somebody which To do activity the (Hasan, 2015).

The traditional engklek game has various benefits for everyone to play, especially for children and it turns out that the benefits are very large for children's growth and development. As stated by Rae (2012: 139) in research (Sukono, 2019) Engklek traditional games have various advantages as follows: (1) As cognitive development, children begin to recognize numbers and count, (2) As social/emotional development, children learn to queue and support their friends, and (3) As a child's physical development, namely, by jumping, turning, low throwing, increasing balance, increasing muscle strength and flexibility.

Dian Apriani (2012:25) in (Sukono, 2019), states, the advantages of playing traditional games crank this is: (1) The child's physical ability increases because in this game method play it by jumping, (2) Increase the sense of socialization with fellow peers, (3) Train children's obedience to the rules that have been made together and agreed upon, (4) Develop logical intelligence so that children can practice tactics to complete a game, (5) Improve the ability to balance because this game uses one leg to play it.

In research (Rozana et al., 2020) stated that the traditional engklek sport has a role to train: (1) balance, (2) agility, (3) eye and hand coordination. Balance is a complex integration of sensory systems (Vestibular, visual, somatocentric, including proprioceptors and musculoskeletal (muscles, joints, and other soft tissues) that are regulated in the brain (motor control, sensory, basal ganglia, cerebellum, and association areas) in response to external and internal changes as well as other factors, namely age, motivation, environment and fatigue. By playing the traditional engklek game, it has an effect on the system visual, vestibular, somatocentric, nor muscular. When there is movement to play there is a process in the brain called central compensation, namely the brain processes to adjust signal changes that occur due to adaptations that function to carry out a series of movements (Pujiati, 2019).

The purpose of applying the ankle exercise is to improve physical condition and balance, according to (Ashari, 2019) if you want to get into good physical condition in the world of sports, you need effective and efficient training to achieve the desired target. So when you want a good physique or a healthy body, you always need regular exercise or
exercise. In the journal (Wahyudi, 2018) put forward physical conditions are necessary and important in improving balance, therefore it must be carefully and systematically arranged in order to facilitate an action that is desired in the future. Motion in its application, the quality of motion depends on 2 elements, namely the effectiveness and efficiency of individual motion. And there are factors that influence these factors, including balance, flexibility, coordination, strength, and endurance. (Martha Yuliani Habut, I Putu Sutha Nurmawan, 2015). Opinion (Ashari, 2019) states that balance is one of the most important things in humans, both in one's daily activities and also for an athlete or athlete, in static or dynamic conditions. This is not only to perfect the components of a technique but is very useful and necessary to support the improvement of each individual's achievement. The body's ability to maintain posture stability cannot be separated from environmental factors and the regulatory system that plays a role in establishing balance, all of which depend on the motor activities that work. According to (Syarif Hidayat, 2018) something that focuses on stable and special states and has something to do with the current environment is called balance. As for opinion (Rimasa & Sartono, 2020) a posture whose purpose is to maintain and be able to master the position of the body, this ability is called balance. It means that every body position is not off with the name balance to maintain a position so that the body of every human being can be balanced and can be controlled to perform the desired activity. While the opinion of (Afifah, 2018) Balance is maintained by adaptable renewal of internal and external factors involving the environment. There are two types of balance, namely static balance and dynamic balance. Static balance is maintaining equilibrium at rest while dynamic balance is maintaining body position because the body is moving in a space of motion.

In the journal (Pratiwi, 2019) put forward the factors that affect the balance there are seven as follows:

**Pointed at the center of gravity**

Every object has a center of gravity, among others, in objects the center is in the middle of the object, in humans or living things the center is in the middle of the body and moves according to the direction or changes in weight. When standing, the center of gravity is between the front and back of the body. This center of gravity distributes body mass evenly.

**There is a line of gravity factor**
The line of gravity is an imaginary line that runs vertically through the center of gravity. The level of stability of the body will be determined by the relationship between the lines of gravity. The level of stability of the body will be determined by the relationship between the line of gravity, center of gravity, and fulcrum. Examples of a person's line of gravity when walking starts from the styloid process temporal, sacral, second anterior, anterior posterior hip and knee.

**Factored at the fulcrum**

The part that is in contact with the supporting surface of the body is the fulcrum. Body will remains balanced when the line of gravity is exactly at the fulcrum. Height stabilization can be achieved by making the fulcrum larger, for example standing on two legs will be more stable than one leg. The fulcrum is the part of the fulcrum of the body that is in contact with the surface of the base. When the line of gravity is at the fulcrum, the body is in balance. Good stabilization is formed from a large area of the fulcrum. The larger the fulcrum, the higher the stability. Projection of the fulcrum or Base of Support.

**On muscle endurance**

Muscular strength is the ability of a muscle or muscle group to produce tension and force during maximal effort either dynamically or statically. The muscle strength of the legs, knees and hips must be strong enough to maintain body balance in the presence of external forces. Muscle strength is directly related to the ability of muscles to resist the force of gravity and other external loads that continuously affect body position. Muscle strength is produced by maximal muscle contraction.

**Factors between men and women**

Differences in body balance based on sex between men and women are caused by differences in the location of the center of gravity. In men it is about 56% of their height while in women it is about 55% of their height. In women, the center of gravity is low because the pelvis and thighs are relatively heavy and the legs are short.

**Body Mass Index**

A person's height and weight reflect the proportions of the person's body. This situation is related to balance, objects with a larger mass have a greater balance than objects of the same size that are lighter. Heavier objects resist the influence of external forces more strongly than lighter objects. Regarding the height and shortness or the weight and lightness of a person, the location of the center of gravity that affects balance will be different.
Age

With increasing age, the ratio between bodies will change. With increasing age, the location of gravity is increasingly under the body, so for children who are growing in age, the balance is in the lower limbs. Preschool children's movements are more controlled, and organized in patterns such as straightening the body in a standing position, hands can dangle in a relaxed manner, can walk by moving the legs and feet. The formation of these patterns and behaviors allows children to respond in various situations.

These factors are factors that affect a person's level of balance in dynamic or static positions, therefore it is necessary to increase the balance of children during this development, because balance is one of the important factors in the physical component to keep the body in shape. And in this study the researchers focused on dynamic balance.

CONCLUSIONS AND SUGGESTIONS

Conclusion

There is an effect of increasing dynamic balance by 11% after being given treatment Engklek traditional sport, as shown by the Wilcoxon test results which resulted in a significance of 0.001 with a significance (2-tailed) of less than 0.05. So Ho is rejected and Ha is accepted, which means that there is an effect of increasing dynamic balance thanks to being given treatment the traditional sport is cranky.

Suggestion

Based on the research and discussion above, researchers need to provide suggestions, namely: (1) The researcher hopes that SD Negeri Kiyonten 1 will apply traditional games, especially engklek and generally all other traditional games, and (2) Hopefully from the results of this study, readers can obtain information from the research. So that it can be used as a reference for preserving this engklek traditional sport so that it can last forever because it turns out to have many benefits for children's development.

REFERENCES


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