

7.DEVELOPING CORE STABILITY EXERCISE MODEL OF PLAYING APPROACH

by Mansur Mansur

Submission date: 25-Apr-2019 03:58PM (UTC+0700)

Submission ID: 1118892574

File name: EN_AGED_10-12_YEARS_TO_IMPROVE_ACCURACY_IN_15_METERS_ARCHERY.pdf (276.61K)

Word count: 3147

Character count: 16858

DEVELOPING CORE STABILITY EXERCISE MODEL OF PLAYING APPROACH FOR CHILDREN AGED 10-12 YEARS TO IMPROVE ACCURACY IN 15 METERS ARCHERY

1 Oktita Indah Pratiwi
Universitas Negeri Yogyakarta
Yogyakarta, Indonesia
oktita0131pasca2015@student.uny.ac.id

Mansur
line 2: Universitas Negeri Yogyakarta
Yogyakarta, Indonesia
mansur@uny.ac.id

Abstract—The objective of this study was to produce a Core Stability Exercises Approach to Play at age 10-12 to accuracy of arching distance of 15 meters, to develop physical exercise by applying a circuit training with the concept of play, and physical training by playing whether it can be improve the result of scoring distance of 15 meters. This research is a Research and Development (RND) research that consists of several stages, namely preliminary stage research consists of data collection through (field study and needs analysis), planning stage, development stage (collection of theories related to the product), validation experts, phase 1 revisions, small-scale trials, phase 2 revisions, large-scale trials, end products, and product dissemination. This final product is packaged in hand book and DVD recording. The sample of this research is at Archery Laboratory School of FIK UNY and SD Muhammadiyah Sapen Yogyakarta. The sampling technique used is purposive sampling. In a small group trial to involving 10 children in Selabora Panahan FIK UNY at the age of 10-12 years. In large group trials involving 36 children and 2 archery trainers. The results of the data collected were the results of large group trial video tapes in the field, using questionnaires on small-scale testing of 82% and large-scale 97.77% and 2 coaches 95% and 92%. In general, the product can be used and classified as Very Good, an expert validation sheet containing 86% and 88% product feasibility levels can be used with the Good category. Effectiveness test on large group of Sig. (2-tailed) 0,001 <0,05 and 0,002 <0,05 can be concluded that giving treatment model of core stability exercises with play approach is feasible to be used and effective model can increase yield score of archery score 15 meters.

Keywords—core stability exercise, accuracy, archery

I. INTRODUCTION

The people's opinion of Archery Sports is very often heard, namely to train focus, concentration and beneficial for physical fitness. Archery is a sport that is in demand in every region so that the development of archery sports is so fast as in the development of technology. Interest in archery sports makes archery as one of the sports liked by children, adolescents and adults, not surprisingly archery is used as a means of recreation and achievement. Distribution of archery talents through extracurricular activities in schools and sports clubs that foster candidates for archery athletes, in addition to the several pre-beginner and beginner competitions held by PERPANI routinely carried out to attract talented athletes, especially in Yogyakarta Special Region (DIY).

Pre-beginner athletes and beginners in archery are often competed at the regional and national levels because they are in the large children's period, ranging from 6-12 years. The tendency of children to grow to the type of body has certain characteristics that are related to the likelihood of conformity to pursue certain sports. Children development are usually physical growth has reached maturity, the child has been able to control the body and balance and physical ability to grow quite rapidly, especially strength, flexibility, balance and ability to throw / gross motor skill [1].

Archery that is focused on the upper 10-12 years of age are beginner classes, during that age children experience rapid growth in the phase of growth and development. Judging from its physical growth, it seems to experience rapid growth in girls from 10 to 13 years and 12 to 15 years of boys [2].

[3] In general, at the age of 10 to 12 years, children begin to show manipulative skills resembling adult abilities. They begin to show complex, complicated and fast movements, which are needed to produce good quality crafts or play certain musical instruments, therefore age is so early that motoric development begins to be developed and allows children to grow quickly and maintain coordination. Archery sports are sharpened with eye, hand and body coordination while archery so that this sport can be introduced since upper class elementary school, based on research "It is mean not that children cannot be given exercise, childhood is a period of most physically active in human growth"[2].

Based on interviews with parents and coaches of archery sports clubs in FIK UNY Selabora Archery and extracurricular Archery of Sapen Muhammadiyah Elementary School Yogyakarta, archery sports are used as a means of introducing or filling free time, training focus in learning and not surprisingly also producing achievements that can benefit the child that.

Sports for children have their presence in determining the future, just as archery sports are identical to pulling arrows and then releasing and repeating, how boring if archery sports are not packaged in attractive forms or balanced with other fun activities related to physical exercise.

Refers according to Pangrazi, Robert P. and Dauer, Victor P, 1989 in the journal Movement In Early Childhood and Primary Education, many children do not exercise after the age of 10, they are less resistant to physical activity after

adulthood, many children claim that they don't exercise (bored) because the activities are not fun. That in archery sports is not only applied to technical training but also physical training is needed to exercise strength, endurance, coordination, stability.

Based on observations of researchers and interviews with archery extracurricular and archery schools in Yogyakarta, some trainers have not applied attractive physical training, so that children are less motivated and bored to do physical activity. The nature of children tends to complain and are less serious in carrying out physical activities provided by the teacher / trainer. The trainer must also understand about physical training in the form of play so that it can provide benefits such as arm muscle strength, improve coordination, strengthen muscular strength and balance, increase motivation, creativity and pleasure.

Some literature promotes physical training that can stimulate brain development and motion such as ballet, rhythmic gymnastics, swimming, soccer, volleyball, athletics, martial arts, tennis, and archery. The above sports can be measured through several tests or physical exercise programs to produce effective and efficient movements.

Core here is a general term that is often used to describe all the muscles of the outer body consisting of the shoulder, back, abdominal, and hip. Scientific evidence which shows that endurance training (also called strength training) can be safe and effective for boys Men and women provided proper training guidelines followed, suggesting that incorporating core stability exercises into a safe physical education curriculum and a valid means of promoting physical fitness for children [4]. These findings are important practical relevance for designing physical activity in physical education lessons for children as well as muscle fitness which are important components in health related to fitness components that contribute to the tasks of daily life, participation in recreational activities and reduction of illness.

Some of these studies have been able to measure abdominal muscles which can stabilize the lumbar spine by increasing the amount of intra-abdominal pressure to maintain the lumbar spine straight and to avoid a cycle of rotation during physical activity. A simple exercise that is used to strengthen the abdominal muscles (rectus abdominus, internal / external obliques, and transverse abdominus) that use isometric or "static" by restraining known as Plank. This form of exercise has often been included in training programs, especially archery sports.

Physical exercise is often applied in archery for children such as sit-ups, push-ups, back up, bow training. Based on a survey of researchers in the Yogyakarta Special Region on several archery clubs that the components in physical training for archery athletes age children such as repetition, number of sets and duration are equated with athletes of adolescence, meaning the form of formal movements without giving elements of play that are not appropriate with the stage of growth and development aged 10-12 years, as a result methods and targets are not appropriate for children means that the form of exercise that has been implemented is not optimal. Another problem is that some trainers have limited knowledge and ability to make the right physical training programs. Therefore the author here modifies the form of physical training to provide a touch of excitement that is packaged in the form of play, namely the research

entitled Development of Core Stability exercises (CSE) approach to play at the age of 10-12 years to improve archery accuracy 15 meters distance.

II. METHODS

This research is a Research and Development (RND) research that was adopted from the development stages proposed by Gall, Gall, & Borg [5] with several stages, namely the preliminary stage research consisting of data collection through (field study and analysis needs), planning phase, development phase (collection of product-related theories), expert validation, revision phase 1, small-scale trials, revision phase 2, large-scale trials, final products and product dissemination. Research time from October to December 2017.

The sampling technique is based on purposive sampling, purposive sampling is chosen specifically based on research objectives [6].

Types of Data In accordance with the objectives of this development study, the data collected consists of two types, namely: Qualitative data covering this data comes from assessments and input from experts in multilateral physical trainers and archery trainers (practitioners). Quantitative data are student response data and 2 archery trainers at school and selabora on core stability exercises approach to play models. To test the effectiveness of products used through qualitative descriptive such as the results of the pretest and posttest design on the accuracy of archery shots at a distance of meters.

TABLE I. NORM PRESENTATION

Presentase	Klasifikasi	Makna
0 – 20%	Not good	canceled
20,1 – 40 %	poorly	repaired
40,1 – 70 %	Good enough	used (conditional)
70,1 – 90 %	Good	used
90,1 – 100 %	Very Good	used

The instruments used in this study are as follows: Questionnaire (Value scale) 1-5 contains questionnaire information 1: not good, 2: poorly, 3 good enough, 4: good and 5: very good. This validation is given to experts and archery trainers (practitioners) to assess whether the game model is in accordance with the intended elements, so the new core stability exercises can be tested. Direct observation technique with the model implementation observation sheet, is used to observe the implementation of the exercise using a core stability exercises model with the form of play. The trainer observation sheet is used to obtain data on the level of feasibility of the draft model developed in actual conditions / field. Product Appraisal Instrument contains the format of product appraisal with a choice (Yes / no) with 10 items applied to the child to assess the performance and responses of children in implementing the model, Scoring value: contains the results of a 15-meter distance shot on a large-scale trial after 8x treatment with pre post design to test the effectiveness of the product being developed.

Data analysis techniques carried out in this study were qualitative descriptive analysis. Qualitative descriptive

analysis was used in the preliminary study questionnaire. At the validation stage of the draft model, to find out the feasibility of the data and data obtained will be described in the form of data presentation then analyzed qualitatively with the final results in the percentage then categorized. In small and large scale tests, the results of the trial were analyzed using a descriptive analysis approach and qualitative analysis (statistics). On a large scale test given 8x physical exercise treatment to determine the effectiveness of the product by using qualitative descriptive analysis, to test the normality of the data using the Kolmogrov-Smirnov Test with Asymp value criteria. Sig with 0.05 criteria accepts research questions if Asymp. Sig > 0.05.

III. RESULT AND DISCUSSION

Initial Product Development Results: Core stability exercise model is a form of modified physical activity from improve physical fitness in national youth [7]. The movement that was originally used for health therapy in healing back injuries such as *Abdominal Crunches, bridge, side plank, modified plank, plank, quadruped, superman, bicycle crunch, segmental rotation* movements. The above movement is carried out in the form of static movements, then the researchers developed a form of core stability exercises in a dynamic movement approach to playing in groups on archery sports aged 10-12 years. This activity consists of 10 posts by way of training, giving the name of the game "TAAMAN1-10" playing. Physical activity is said to be done if the child has passed each post in sequence. The title of the movement is modified according to the author's design.

Product Expert Validation

The results of filling out questionnaires obtained by 86% physical and multilateral trainers with good categories and 88% archery sport practitioners with good categories, the conclusion is a feasible model for use / field trials with revisions according to suggestions.

Product Revision by Expert

The product revision process is based on the advice of the physical and multilateral trainer experts as follows: Product revision or model conducted by the researcher is a training duration of between 15-30 seconds in a progressive manner or determined from the beginning eg 15 seconds. Product revision or model conducted by researchers is a game model that contains elements of safety must be clear rules, if using dangerous tools. Product revision or model conducted by researchers is clarity in the implementation instructions must be equipped with "safety". Product revision or model conducted by researchers is the sequence of circuit training must be systematically emphasis on (arms, legs, whole body). Product revision or model conducted by researchers is in the guidebook added warming up and colling down movements.

Small Group Trial Results.

Based on the results of questionnaires filled in by the athletes, the percentage of answers according to the aspects assessed was 82%. Based on the criteria that have been determined, the core stability exercises development model with a play approach meets the criteria of Good or can be used for 10-12 year old children.

Large Group Trial Data

Based on large group trials with questionnaire results on 36 athletes obtained a percentage of 97.77% with the meaning of the model can be used and very good criteria. Then test the feasibility of the response or percentage assessment by archery trainer SD Muhammadiyah sapen Yogyakarta FIK UNY percentage of 92% with very good criteria.

TABLE II. THE PERCENTAGE OF LARGE SCALE TEST

Subject	Percentage Score	Clasification	Meaning
36 Athletes	97,77 %	Very Good	Used

TABLE III. THE PERCENTAGE OF CLASSIFICATION SCORE OF COACHES

Subject	Percentage Score	Clasification	Meaning
Selabora Coach	95 %	Very Good	Used
Sapen Coach	95 %	Very Good	Used

Based on the criteria that have been determined in the model of developing core stability exercises with a playing approach at the age of 10-12 years have met the criteria very good so that this model can be used or included in the physical activity program for children aged 10-12 years in the upper class of SD Muhammadiyah Sapen and selabora archery FIK UNY.

Product Effectiveness Test Data in Large Group Trials (10-12 Years Children)

Calculation Results of the Normality Test for large groups of Kolmogrov-Smirnov Test data. Based on the results of the table presented below, it can be seen that each group, with a total sample of 36 children, has Asymp. Sig > 0.05, then the data group is normally distributed, meaning that the group data is normal.

TABLE IV. THE RESULT OF NORMALITY DATA TEST ANALYSIS

Variabel	Significancy	Clasification
Selabora Archery FIK UNY (pretest)	0.173	Normal
Archery SD Muh Sapen (pretest)	0.200	Normal
Selabora Archery FIK UNY (posttest)	0.200	Normal
Archery SD Muh Sapen (posttest)	0.200	Normal

Test Results of Research Questions (t test)

Answering the research questions that have been made by the researcher, then the Test-t analysis to find out "Is effective and feasible to use the treatment of physical activity of core stability exercises with a play approach?" Therefore, after the finished product pre-test the archery score, then treat for 8x meetings ends with a post test at a distance of 15 meters.

Below will be presented the results of the T-Test as follows:

Table 5. Summary of T-Test Analysis Results

TABLE V. THE SUMMARY OF T-TEST ANALYSIS RESULT

Variables	df	Sig. (2-tailed)
Selabora Archery FIK UNY	17	0.001
Archery SD Muh Sapeh	17	0.002

Decisions based on the results of the table above show that there is a significant difference between the results of the pre-test score of 15 meters and post-test which means that there is an effect of the 8x treatment meeting on the results of the post test score of 15 meters. So it is known that the value of sig (2-tailed) archery Selabora FIK UNY $0.001 < 0.05$ and the sig (2-tailed) value of Archery Extracurricular SD muhammadiah sapen $0.002 < 0.05$.

IV. CONCLUSION

Testing the feasibility Based on the results of expert validation it was stated that the core stability exercises model with the approach to play at the age of 10-12 years is worthy of use and categorized as good. Based on the results of the implementation of a small group trial with a core stability exercises model with a play approach to a sample of 10 children which contains interest and pleasure in playing, understanding of the rules, interest in the tools used, usefulness in training the muscles to support archery technique skills, and the desire to repeat the game states that the model is worthy of good use.

In the trial phase of large groups on the model of development of core stability exercises with a play approach to the age of 10-12 years to improve archery accuracy 15 meter distance, consisting of 36 samples and 2 trainers stating that core stability exercises are categorized as very good. Based on the analysis of the effectiveness of the core stability exercises model with a play approach at the age of 10-12 years, it can be concluded that the provision of core stability exercises with a play approach suitable for use and an effective model can increase the yield of archery scores 15 meters. The results of this product are packaged in the form of handbooks and DVD recordings so that this model can be easily applied by the trainer.

REFERENCES

- [1] Sugiyanto, *Perkembangan dan belajar motorik*. Jakarta: Departemen Pendidikan dan Kebudayaan, 1998.
- [2] Lumintuarsi, *Pembinaan multilateral bagi atlet pemula*. Yogyakarta: UNY Press, 2013.
- [3] Desmita, *Psikologi perkembangan*. Bandung: Remaja Rosdakarya, 2006.
- [4] Ahmadi R. Hidari N. Mahdavi B, daneshmandi H, "The effect of core stabilization exercises on the physical fitness in children 9-12 years," *Journal of Sport Medicine*, vol. X, no 3, pp.2401-2405, 2014.
- [5] Borg, W. R. & Gall M. D., *Educational research anintruction*. Fourth Edition. New York: Longman, 2007.
- [6] Sugiyono, *Metode penelitian kuantitatif, kualitatif dan RnD*. Bandung: Alfabeta, 2011.
- [7] Pierce. Patricia, nichols R. Herman S, "Core for the classroom". *Education database* pp.23, 2007.

7.DEVELOPING CORE STABILITY EXERCISE MODEL OF PLAYING APPROACH

ORIGINALITY REPORT

4%

SIMILARITY INDEX

2%

INTERNET SOURCES

1%

PUBLICATIONS

4%

STUDENT PAPERS

PRIMARY SOURCES

1

Submitted to Universitas Sebelas Maret

Student Paper

2%

2

www.medicinasportiva.ro

Internet Source

1%

3

journals.sagepub.com

Internet Source

1%

4

www.domyos.co.uk

Internet Source

<1%

Exclude quotes On

Exclude matches < 2 words

Exclude bibliography On

7.DEVELOPING CORE STABILITY EXERCISE MODEL OF PLAYING APPROACH

GRADEMARK REPORT

FINAL GRADE

/100

GENERAL COMMENTS

Instructor

PAGE 1

PAGE 2

PAGE 3

PAGE 4
