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MEDIA-BASED AGILITY TRAINING MODEL OF BADMINTON GAMES FOR STUDENTS OF UNIVERSITAS NEGERI JAKARTA BADMINTON CLUB

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Abstract

Badminton athletes need agility to place the shuttlecock into an empty opponent's field so that the opponent finds it difficult to return the ball. So, the purpose of this study is to create an exercise model to improve agility in the badminton game. Making this model through five stages, namely analysis, design, development, implementation and evaluation with the type of development research and development from Robert Maribe Branch. The results of the developed model were validated by three experts in badminton. As many as 20 exercise models that are declared feasible. Based on the five stages of research (analysis, design, development, implementation and evaluation), the results obtained that the training model developed was feasible and could be applied to badminton club athletes at the State University of Jakarta. The conclusion of the research is the media-based agility training model of the badminton game can be applied to the training process that aims to improve the athlete's agility.

Keywords: badminton; agility; ADDIE; model

INTRODUCTION

Badminton is a sport that is in great demand by people around the world, including in Indonesia. This can be seen by the large number of people who take part in every badminton sport activity.

Badminton is an intense sport that requires fast and sudden movements (Chen, Mok, Lee, & Lam, 2015). The badminton game is played by hitting the shuttlecock to areas that are difficult to reach, so athletes need quick steps to return the shuttlecock at various speeds in various directions (Masu & Nagai, 2016).

Badminton is a sport that requires high physical neuromuscular in the lower limbs (Abián et al., 2016). Successful performance in badminton requires players to accelerate, slow down, change direction, move fast and maintain balance (Girard & Millet, 2008; (Duncan, Chan, Clarke, Cox, & Smith, 2017). Change of speed is the ability to speed up and slow down at the same time as a change of direction (Sonoda, Tashiro, & Suzuki, 2018). Continuous repetition of short bursts of

high intensity, including jumps and changes of direction, interspersed with recovery periods between rallies is achieved by programmed, regular, and systematic exercise (Shariff AH, 2009; (Moreno-Perez et al., 2020).

Exercise is a systematic and structured process that aims to improve one's abilities according to the sport (Zakas, 2005). Using effective and efficient training methods driven by facts or symptoms that appear in training (Dahniar Widya Puspita Dewi, Widiastuti, & Samsudin, 2021). Also, using various equipment according to the goals and needs of the sport (Emral, 2017). The goals have been determined, designed in detail and gradually for the adjustment of physiological and psychological development (Wiguna, 2017). Training aims to help athletes improve their skills and maximum performance (Harsono, 2016). Exercise training can be defined as a systematic process of preparing for a certain physical goal. This goal used to be synonymous with peak physical performance (Lambert, Viljoen, Bosch, Pearce, & Sayers, 2008).

Badminton requires several components such as speed, agility, and so on (Werkiani, Zakizadeh, Feizabadi, Golsefidi, & Rahimi, 2012). Agility is an important physical capacity for sports performance (De França Bahia Loureiro & De Freitas, 2016). The agility referred to in the badminton game is the ability to change direction accurately and quickly, move the body quickly from side to side.

In other words, the element of agility is one of the important elements in playing badminton to get achievements in the sport. When playing badminton, players will try to place the shuttlecock into an empty opponent's field so that the opponent finds it difficult to return the ball, and the player will then get a point in the game. To be able to place the shuttlecock, basic techniques and good agility are needed.

However, many athletes are less interested in doing physical exercise, only prioritizing technical and tactical training. Many people think that physical exercise only makes them tired and boring, so that the average badminton players are physically weak, less aggressive, and less agile. Whereas agility is a physical ability that must be possessed by a badminton athlete in performance in addition to other physical abilities.

Players who have good agility will be able to master more complex techniques and tactics to reach the shuttlecock to get a good and accurate shot. Thus, the agility factor is very important in badminton in order to reach good and accurate strokes. Without the elements of speed and flexibility, one cannot move swiftly.

The characteristics of badminton at this time are more attacking patterns to control the game with long rallies to get points, especially in the men's singles number, in building an attack an athlete must be able to master all techniques and physically. Especially agility because this is very important in singles play and agility is very often a major factor in teaching and returning the shuttlecock. So, athletes must have extra agility. Because in the rally point system, the intensity of the game increases where mistakes made by players will immediately result in points for the opponent.

Jakarta State University is one of the universities that has a badminton club which is often called the Jakarta State University Badminton Achievement Sports Club (KOP). The Jakarta State University Badminton Association's KOP is a forum for students to share knowledge and to improve the badminton achievements of the Jakarta State University. The competition for badminton athletes between universities has also become a very prestigious event for these student athletes with a forum for championships between universities throughout Indonesia.

Based on the observations and observations of researchers directly, many students have poor agility. Caused by game-focused practice only. So that the performance decreases and the quality of the game, especially related to agility is still lacking, this can be seen when returning the shuttlecock which is still not optimal, can give points to the opponent. This is due to the lack of variety in training and the lack of references to agility training in badminton.

Seeing the importance of agility techniques in badminton, it can be concluded that it is included in the less category with the presence of several forms of agility described above. Researchers will make references to agility training models using media that will be applied in an exercise program. This reference aims to instill the right

concept of agility during matches and training.

METHODS

The purpose of this research is to produce a media-based agility training model for sports club students at the State University of Jakarta that is more effective, varied and can provide a new atmosphere in badminton agility training. The type of research used is quantitative using the development model by Robert Maribe Branch, namely the ADDIE model (Analysis, design, development, implementation, and evaluation) (Wenly, Pelana, & Wasan, 2021).

The research was conducted through 5 stages, as follows:

Analysis

Based on the observations and observations of researchers directly, many badminton athletes at the State University of Jakarta have poor agility. Caused by monotonous training that focuses on the game only, thus making athletes bored. Agility is one of the things needed to support the game of badminton. Therefore, the researchers tried to find a way to make the media-based agility training model in the badminton game more innovative, varied and not boring.

Design

At this stage the researchers made 20 models of agility exercises that were carried out to achieve the training objectives. So, at this stage the researcher will design the model, because it supports the abilities and interests of athletes to be more active and diligent in training.

Development

At the design stage, which has been finalized by selecting the training strategy that will be applied, selecting the teaching materials to be used, and the product that has been made, it has been validated by Expert Judgment.

Implementation

At this stage, the model that has been developed and applied to actual conditions is implemented, the material presented is in accordance with the existing model.

Evaluation

Evaluation is carried out to measure the level of success of the training model that has been made. Evaluation is carried out in two forms, namely formative and submative. Formative evaluation is carried out at the end of each face-to-face (weekly) while submative evaluation is carried out after the activity has ended as a

whole. Submative evaluation measures competence at the end of the material or training objectives to be achieved.

RESULTS AND DISCUSSION

Results

Researchers produce products in the form of written works or scripts that present forms of agility training models for badminton that have been validated by experts. This model product was developed through five stages, namely analysis, design, development, implementation and evaluation. This product will be distributed to teachers or lecturers, and badminton trainers are expected to be a reference material for badminton teachers, lecturers and trainers in a variety of agility training models.

Needs Analysis Results

Based on observations, the general objectives of the agility training model in badminton are obtained, in addition to several general objectives, researchers can also find out some of the characteristics of the subject of the agility training model that will be developed.

Model Eligibility

In order for this training model to be used properly, the researchers conducted an expert feasibility test by two experts in their field, namely: 1 badminton expert lecturer, Drs. Endang Darajat, M.KM, 1 badminton coach Mr. Fajar Arie Mangun, M.Pd. The role of each of the experts mentioned above is to examine whether the media-based agility training model for the Jakarta State University Badminton KOP athletes is feasible, each expert giving a "valid" or "invalid" rating for each model studied. The following are data from experts in the assessment of media-based agility training models for KOP Badminton, Jakarta State University athletes in this study:

Table 1.
Results of the Second Stage of Futsal Expert Assessment

Model name	Expert 1	Expert 2	Expert 3
Cross forward agility model around the cone	Good	Good	Good
Cross back agility model around the cone	Good	Good	Good
The agility model jumps over the slope and runs after the cock	Good	Good	Good
Advanced agility model touches the flag	Good	Good	Good
The backward agility model touches the flag	Good	Good	Good
Right side agility model touches the flag	Good	Good	Good
Left side agility	Good	Good	Good

model touches the flag			
3-point back and forth cone agility model	Good	Good	Good
Side 3-point cone agility model	Good	Good	Good
Left position jumping sprint agility model	Good	Good	Good
Jumping sprint backward agility model right position	Good	Good	Good
Agility model hits the net	Good	Good	Good
Jumping agility model	Good	Good	Good
Right sprint variation agility model	Good	Good	Good
Left sprint variation agility model	Good	Good	Good
Model of jumping sprint agility	Good	Good	Good
Side jumping agility model	Good	Good	Good
Sprint zigzag agility model	Good	Good	Good
Variation agility model touches the cone	Good	Good	Good
Sequential jumping agility model	Good	Good	Good

The feasibility test above is based on the results of a review of experts who stated that the 20 models of media-based agility training for the Jakarta State University Badminton KOP athletes were feasible. In addition to the summary of the validation sheet above, the researcher has also summarized the suggestions and inputs submitted by the experts on these models, as follows:

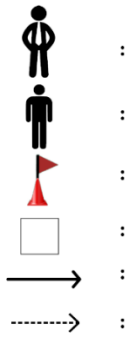
1. Make a media-based agility training model in badminton games that are more adapted to the difficulty of the athlete's ability.
2. The design of the model must be specific and clarified so that it is easy to understand.
3. Writing the rules of the exercise model must be short, concise, and clear so that it is easy to understand.

Model Final

The initial model made by the researcher was 20 models of agility training. After validation by experts, the agility training model has been considered feasible. The following will discuss 3 examples of the models that were developed:

Purpose: To train leg muscle strength, speed in changing the direction of motion, eye, foot and hand coordination and to train concentration.

Description on the picture:



Target movement

back to starting position

Advanced agility model touches the flag

Picture:

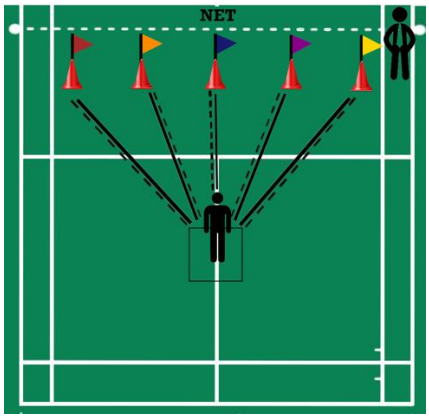


Figure 1. The forward agility model touches the flag

Implementation instructions:

1. Trainers and students get ready in a predetermined starting position.
2. The coach gives the signal, by blowing the whistle.
3. The trainer provides 5 flags with different colors.
4. The trainer randomly determines which flag the students should touch.
5. Students respond with footwork movements or alternating footsteps to touch the specified flag.
6. Next, after touching the flag the student retreats back to the starting position.
7. The trainer chooses another flag at random which students should touch.
8. Students respond again with footwork movements or alternating footsteps to touch the specified flag.
9. Students retreat back to the starting position.
10. The coach will continue to do so until the specified time limit.

3-point cone agility model back and forth

Picture:

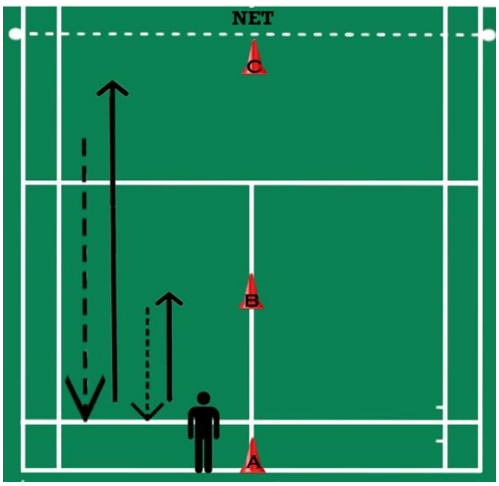


Figure 2. 3-point cone agility model back and forth

a. How to do:
   1. Coaches and students prepare for the predetermined initial position.
   2. The coach gives aba – aba, by blowing the whistle.
   3. Students prepare in the starting position of cone A.
   4. After the whistle is blown, the student runs *the sprint* to cone B.

5. Students retreat back to their starting positions.
6. Next, students run *the sprint* to cone C.
7. After that retreat back again to the starting position, do it continuously until the specified time of the coach

Net touch agility model

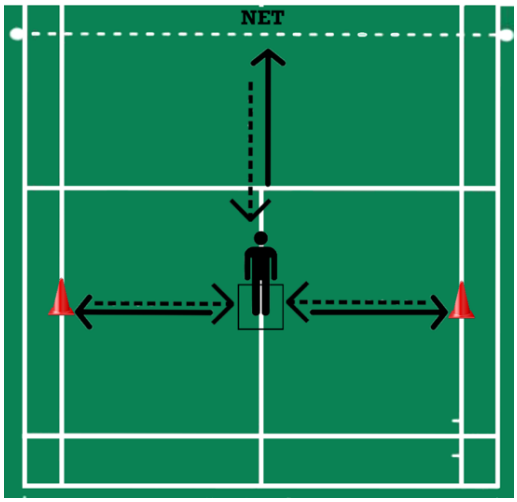


Figure 3. Net touch agility model

a. How to do:
   1. Coaches and students prepare for the predetermined initial position.
   2. The coach gives aba–aba, by blowing the whistle.
   3. After the whistle is blown, the student makes consecutive steps to the right and touches cone A.
   4. Then do a step to the left touching cone B.
   5. After that it returns to the starting position and runs forward touching the net
   6. Students then retreat back to their starting positions

Discussion

The model that the researcher presents aims to provide a variety of media-based badminton agility training models for KOP Badminton athletes at the State University of Jakarta. This training model was made based on the level of need and analysis carried out in the field, namely the lack of variations in the badminton agility training model, so the researchers made the exercise model.

The subjects taken in the study were athletes from KOP Badminton, State University of Jakarta, where the problem occurred, in the field the training process - that's all there was no variation in training which made athletes feel bored. so it takes a variety of training models so that athletes who do exercises do not get bored easily and feel happy doing agility exercises. After reviewing this model, several weaknesses need to be improved. According to the above, several advantages of this model can be conveyed, including:

1. There are many variations of the model.
2. The exercise model is easy to do.
3. The training model packaged in the form of this book attracts the attention of athletes so that athletes can read and practice it.
4. Exercises are carried out from easy to difficult movements

Conclusion

Based on the data from the discussion on the validation of the badminton expert lecturers and the discussion on the validation results of the badminton coach, it can be concluded that the media-based agility training model in the badminton game can be applied to the training process that aims to improve the athlete's agility.

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