The Flexibility Training Model Developed to Improve Sepaksila and Service Skills for Tekong Athletes in Sepaktakraw Game

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ABSTRACT
This research aims to: 1) produce a valid and effective model for tekong athletes in sepaktakraw game 2) find out whether the flexibility training model developed can improve sepaksila and service skills for tekong athletes in sepaktakraw game, especially students. This research used a product development research method in the form of a flexibility training model for sepaktakraw tekong athletes in Physical Education Sriwijaya University with the following procedure: (1) product analysis, (2) develop the initial product (3) validating experts (4) conduct small group trials, 5) conduct large group trials (6) revision product and (7) final product. Data collection techniques used observation and questionnaires were analyzed using percentages, while data service and sepaksila test were analyzed using t test. Subject research 40 Sriwijaya University Physical Education studens that participated in the training activities of sepaktakraw sports. The results of the research flexibility training model designed to improve the service ability of tekong by t count 12.26512.265 > t table 1.68385 and sepaksila ability with a count of 11.572. > t table 1.68385. The flexibility training models for sepaktakraw tekong athletes in Physical Education Sriwijaya University produce an effective product to impove sepaksila and service skills, so it can be suggested for lecturers and trainers to use this model as an alternative.

Keywords: Flexibility, Service, Tekong, Sepaksila.

1. INTRODUCTION
The Sepaktakraw game is a traditional Indonesian sport that is competed in national and international official events, besides that, Sepaktakraw is a compulsory sport for students in Indonesia, this is stated in the curriculum in schools and colleges. According to [1] the first stage to practice sepaktakraw must first master the technique of sepaksila, then the opinion of [2] sepaksila movement is the main basic movement in the game of sepaktakraw. In addition, the opinion of [3] good sepaksila technique will determine the skills of other techniques and athletes will be easier to master advanced techniques.

According to [4] kick, especially sepaksila is the dominant movement in the game of sepaktakraw or in other words sepaksila is the mother of technique in the game of sepaktakraw. In Darwis' opinion, R the main training stage for sepaktakraw beginners is learning sepaksila movement. Opinion of Hanif, S sepaktakraw game requires high basic techniques such as sepaksila movement, to support it requires the ability to change the direction, speed and shape of the athlete's body [5].

The opinion of Iyakrus (2011) that to be able to play Sepaktakraw requires mastery of basic techniques namely smash techniques, block techniques and service techniques. According to [6] Service is a movement to kick a ball to start a game in the sepaktakraw sport, then Darwis R (1992) a good service movement can get maximum points in a game. Research conducted by [7] good service can determine the victory of a team. This research is in line with the opinion of Iyakrus that
athletes to perform service movements require several physical components, namely movement speed, muscle strength and leg muscle flexibility [8].

According to Michle flexibility is related to the presence of joint space and broader muscle elasticity. Flexibility is the ability to move joints and muscles throughout their range of motion. Opinion of Hanif S flexibility is the ability of the joint to perform maximum motion. From the flexibility theory above, it can be concluded that Tekong Sepaktakraw athletes in performing service require an aspect of leg muscle flexibility to start a game, for this reason training is needed that can expand the movement of the leg muscle joints so that they can perform service appropriately and are directed at the opponent's spaciousness. In this regard, the Researchers designed a model of limb muscle flexion training that can improve service skills as well as the ability of sepaksila in sepaktakraw games for students [8,9].

2. METHOD

According to Michle flexibility is related to the presence of joint space and broader muscle elasticity. Flexibility is the ability to move joints and muscles throughout their range of motion. Opinion of Hanif S flexibility is the ability of the joint to perform maximum motion. From the flexibility theory above, it can be concluded that Tekong Sepaktakraw athletes in performing service require an aspect of leg muscle flexibility to start a game, for this reason training is needed that can expand the movement of the leg muscle joints so that they can perform service appropriately and are directed at the opponent's [10].

Samples taken were 40 students who took part in the extra-curricular sports Sepaktakraw at Sriwijaya University with research instruments including service ability test and sepaksila ability test. To assess the quality of the product using a questionnaire on student responses. The data obtained through observations and questionnaires were analyzed with presentations to assess the feasibility level and product quality, while to determine the effectiveness of the product the data obtained from the measurement results of the service test ability and the sepaksila test ability in the Sepaktakraw game were analyzed using the t test [11].

Table 1. Paired Samples Statistics

| Pair   | Pre test | Mean | N   | Std. Deviation | Std. Error Mean |
|--------|----------|------|-----|----------------|-----------------|
| Pre test | 37.35    | 40   | 6.011 | .950          |
| Post test | 42.55    | 40   | 5.109 | .808          |

The pre-test score of service ability was 37.35, while the post-test score was 42.55, for the Std.Deviation in the pre-test was 6.011 and the post-test was 5.109, while the Std. The error for the pres test is 950 and for the post test is 808. Because the average value of the pre test service results 37.35 < post 42.55, Then descriptively there is a difference in the average service results between the pre-test and the post-test results. While the correlation coefficient value is 0.896. Because the t value of service count 12.265 > t tabel 1.683, It can be concluded that there is an average difference between

3. RESULT AND DISCUSSION

After the product development of a flexibility training model to improve tekong and sepaksila service capabilities for small-scale trial athletes and then being revised, the next step is to conduct trials on a large scale. Following are the results of research on flexibility training models to improve the ability to service tekong and sepaksila [12].

3.1. Data on Pre Test Results and Service Ability Post Test

Table 2. Paired Samples Correlations

| Pair  | Pre test & Post test | N   | Correlation | Sig. |
|-------|----------------------|-----|-------------|------|
| Pre test & Post test | 40     | .896 | .000        |

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the pre-test service ability and the post-test service ability, which means that there is an effect of the flexibility training model to improve the service ability of Tekong athletes.

3.2 Pretest and Posttest results data Capacity

The results of the calculation using spss 22 increase the ability of sepaksakraw athletes as follows:

Table 3. Paired Samples Statistics

|               | Mean | N  | Std. Deviation | Std. Error Mean |
|---------------|------|----|----------------|-----------------|
| Pair Pretest 1| 39.18| 40 | 4.396          | .695            |
| Posttest      | 43.98| 40 | 4.682          | .740            |

Table 4. Paired Samples Correlations

|                | N  | Correlation | Sig. |
|----------------|----|-------------|------|
| Pretest & Posttest | 40 | .835        | .000 |

The pretest value of the average capability is 39.18 while for the post test value 43.98. For Std.Deviation on the pretest is 4,396 and the post test is 4,682 while the value of Std. Error for pre test is 695 and for posttest is 740. Due to the average value of the pretest results 39.18 < posttest 43.98, then descriptively there is a difference in the mean score of sepaxila between the pretest and the results of the sepaxila posttest. While the correlation coefficient value is 835. Because the t value of service is 11,572 > t tabel 1.68385, it can be concluded that there is an average difference between the ability of pre-test skills and post-test skills that means there is the influence of a training model to improve the skills of tekong athletes.

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Based on the validation data by 2 (two) experts each Lecturer and sepaktakraw trainers about the quality of the training model product model for improving the ability of service tekong and sepak silica students, then obtained the value of each A1 41 and B1 43 experts with good category.

From the results of the analysis of the effectiveness and validation of the product, it can be stated that the flexibility training model can improve the service skills of students and the ability of students with an average pre-test service ability score of 37.35 and a post-test score of 42.55 with a t-count of 12,265. > t table 1.68385. This is in line with the research of Iyakrus (2014) that Tekong athletes can improve their service abilities by doing physical flexibility training before doing technical training. Then the research of Jufrianis, A and Sulaiman stated that leg muscle flexibility affects the accuracy of service in the Sepaktakraw game [13,14].

The results of the research on the flexibility training model for sepaktakraw athletes are in line with the research conducted by Saharuddin that the leg muscle flexibility factor is the dominant factor determining the success of athletic service, then research conducted by Tharig Khan and Azizuddin Khan states that special imagery cognitive training is needed to improve the quality of service skills. The importance of specific leg muscle training for tekong athletes is also in accordance with the opinion of Hanif S that Tekong athletes are the main factor in determining the victory of a team in the Sepaktakraw game [15-17]. Then Sulaiman's study of leg muscle flexibility and power has a contribution to determining the victory of a sepaktakraw team. The results of this study are also supported by the results of previous research by Herman Syah and Jufrianis, Akbar that Split flexibility training has an effect on the accuracy of soccer service targets in the game Sepak Takraw on the Men's Team UNDIKMA Mataram 2020 [17-20].

4. CONCLUSION

Based on the results of research that has been done with the training model for the formation of tekong athletes in the game of sepaktakraw for students can be concluded that the development of the training model of fertility produces a product of training training to improve the service skills and skills of the tekong athletes in the game of sepaktakraw for students. The development of an effective fitness training model improves the service skills and competence skills of tekong athletes in sepaktakraw games for students. Researchers provide recommendations for the use of flexibility training models for students as follows: The training model is designed to improve the service skills
and skills of the tekong athletes in the sepaktakraw game as an alternative training model for students. The training model to improve the service skills and skills of the tekong athletes in the sepaktakraw game can be used for beginner sepaktakraw athletes under the guidance of the coach.

REFERENCES

[1] Aires, L., Andersen, L. B., Mendonca, D., Martins, C., Silva, G., & Mota, J., A 3-year longitudinal analysis of changes in fitness, physical activity, fatness and screen time. Acta Paediatrica, vol. 99, no. 1, 2010, pp. 140–144. doi: 10.1111/j.1651-2227.2009.01536.x.

[2] Azizuddin Khan, T. K., Janep, M., & Hamzah, S., The effects of specific and general cognitive imagery on service achievement among tekong in sepaktakraw (29 - 47). Jurnal Sains Sukan & Pendidikan Jasmani, vol. 2, no. 1, 2013, pp. 29-47. Retrieved from https://ejournal.upsi.edu.my/index.php/JSSPJ/article/view/594

[3] Areepattamannil, S., Freeman, J. G., Academic Achievement, Academic Self-concept, and Academic Motivation of Immigrant Adolescents in the Greater Toronto Area Secondary Schools, vol. 19, 2008.

[4] Bompa, T.O., Theory and Methodology of Training: The Key to Athletic Performance. Dubuque, Iowa; Kendall/Hunt Publishing, 2009.

[5] Branch, R., Instructional design. In Designing for Older Adults, 2009. https://doi.org/10.1201/b22189-8

[6] Castelli, D. M., Hillman, C. H., Buck, S. M., & Erwin, H. E. Physical fitness and academic achievement in third- and fifth-grade students. Journal of Sport and Exercise Psychology, vol. 29, no. 2, 2007, 239–252. doi: 10.1123/jsep.29.2.239

[7] Darwis, Ratinus, Olahraga Pilihan Sepaktakraw. Jakarta: Direktorat jenderal Dikti, 1992.

[8] Deny, Muslim, Mari Bermain Sepaktakraw. Jakarta: PB. Persatuan Sepaktakraw Indonesia, 1999.

[9] Hanif, Sofyan, Kepelatihan Dasar Sepaktakraw, PT Bumi Timur Jaya, Jakarta, 2011.

[10] Jufrianis, Akbar, and J. Tangkudung, The Effect of Eye-Foot Coordination, Flexibility of The Limbs, Body Balance And Self-Confidence To The Accuracy Of The Football Of Sepak Takraw. Journal of Indonesian Physical Education and Sport, 2018. Vol. 4, No.1(July 2018): p. p 39-45.

[11] Iyakrus. Permainan Sepaktakraw. Palembang: Fakultas Keguruan Ilmu Pendidikan (FKIP) Universitas Sriwijaya, 2012.

[12] Iyakrus, Physical Exercise Model for Tekong Athlet Sepaktakraw Sriwijaya University. In: Asean University Sports Council International Conference 2014, 11-12 Desember 2014, Sriwijaya University Palembang, Indonesia.

[13] Iyakrus, Nutritional Intake Level of Sepaktakraw Athletes In Sekolah Olahraga Negeri Sriwijaya (Sons) Palembang South Sumatra, Sriwijaya University Learning Education International Conference, Vol 3, No 1, 2018.

[14] Michael, J., Peregangan Olahraga. Jakarta: PT Rajagrafindo, 1999.

[15] Nurhasan., Petunjuk Praktis Pendidikan Jasmani (Bersama Membangun Manusia Yang Sehat Jasmani Dan Rohani). Surabaya: Unesa Universitas Press, 2005.

[16] O ‘Shea, JP., Scientifik Principle and Method of Strength Fitness. California: Addison Wesley Publishing Company, 1996.

[17] Suhud, Muhammad, Sepaktakraw, Jakarta, Balaipustaka, 1990.

[18] Sugiono. Metode Penelitian Pendidikan. Bandung: Alfabeta, 2009.

[19] Sulaiman, Taufik, Hidayah, Muhamad Azwan, Contribution of Leg Muscle Power, Leg Flexibility and Balance to Kedeng Smash Ability Sepaktakraw Game, 2020, Available Online 23 June 2020

[20] Thariq K, azizuddin k, the effects of specific and general cognitive imagery on service achievement among tekong in sepaktakraw. Jurnal Sains Sukan Dan Pendidikan Jasmani / Proceedings of the International Conference on Science and Education and Technology (ISET 2019), Vol 2 No 1, 2013.