Education Quarterly Reviews

Tulyakul, S., & Thammathes, S. (2024). The Effects of the Combined Training Program on Agility in Football Players. *Education Quarterly Reviews*, 7(1), 112-117.

ISSN 2621-5799

DOI: 10.31014/aior.1993.07.01.804

The online version of this article can be found at:
https://www.asianinstituteofresearch.org/

Published by:
The Asian Institute of Research

The Asian Institute of Research *Education Quarterly Reviews* is a peer-reviewed International Journal. The journal covers scholarly articles in the fields of education, linguistics, literature, educational theory, research, and methodologies, curriculum, elementary and secondary education, higher education, foreign language education, teaching and learning, teacher education, education of special groups, and other fields of study related to education. As the journal is Open Access, it ensures high visibility and the increase of citations for all research articles published. The *Education Quarterly Reviews* aims to facilitate scholarly work on recent theoretical and practical aspects of education.

ASIAN INSTITUTE OF RESEARCH
Connecting Scholars Worldwide

The Asian Institute of Research
Education Quarterly Reviews
Vol.7, No.1, 2024: 112-117
ISSN 2621-5799

DOI: 10.31014/aior.1993.07.01.804

The Effects of the Combined Training Program on Agility in Football Players

Somchai Thammathes[1], Singha Tulyakul[2]

[1] Student at the Master of Education Program in Physical Education, Thaksin University, Thailand
[2] Lecturer at Department of Health and Physical Education, Faculty of Education, Thaksin University, Thailand

Correspondence: Somchai Thammathes. E-mail: sthammathes@gmail.com

Abstract

This research aimed to develop and compare the effects of a combined training program on the agility of football players. The sample group was male football players from the National Sports University, Yala Campus, obtained from the purposive sampling of 30 people, divided into an experimental group of 15 people trained through a combined training program created by the researcher. At the same time, 15 football players of the control group were trained by a regular agility training program for eight weeks, three days per week, and 1 hour and 5 minutes per day. The SEMO agility test was used to measure agility. All data were analyzed by averaging and calculating standard deviation. The Wilcoxon signed ranks test was used to compare the results of agility training within the control and experimental groups' pretest and posttest. The Mann-Whitney U test was used to compare the pretest and posttest between the control and experimental groups. The research found that the combined training program created by the researcher was suitable. It was also found that the experimental group had better agility than the control group at the significant level .05. Both within the experimental and the control group, it was found that the agility posttest was better than the pretest at the significant level .05. The study results will serve as guidelines for enhanced players, coaches, and those who interested the football in the future.

Keywords: Combined Training Program, Agility, Wilcoxon Signed Ranks Test, Mann-Whitney U test

1. Introduction

Nowadays, football is a popular sport played around the world. Football plays a role in daily life through various types of movement and equipment. Football in Thailand has competitions at the national level, region, province, sub-district, educational institutions, agencies, and others. Consistent with Kongwongsa (2019) and Poolsawat (2005), football is a sport that is more popular worldwide than any other sport and has many people following the competition. Because football is a sport played for health and entertainment, it also develops the economy and society. In terms of competing for a championship, football players must be skilled in dribbling, kicking, passing, and shooting. These skills are important basic skills of football. Football players must receive regular training in the correct training methods to allow the athletes to compete effectively. In sports competitions, elements of physical fitness are important, such as balance, muscle strength, endurance, speed, flexibility, and agility. For

accomplished football players, agility is one of the essential physical abilities used in competition because agility is the ability to change position or direction of body movement with speed and efficiency. Due to the ability to contract various muscles to work together well. The methods that will help strengthen the body to be more agile include activities that make the muscles in different body parts work together and coordinate in changing the position and direction of the body's movement (Phuthai, 2020). This is consistent with Chanchuay (2007), who stated that agility is the basis of physical fitness, is important for daily life, and is an essential part of playing many sports, for example, football, volleyball, basketball, table tennis, etc.

Agility is crucial for football players because dribbling and dodging opponents require physical fitness (Krabounrat, 2002). Therefore, coaches need to know the principles of developing agility. Enhancing physical fitness in football athletes has a variety of methods depending on the purpose of the training.

The researcher took on the role of assistant football coach at the National Sports University, Yala Campus, Thailand, which found that the results of the physical fitness test regarding agility of football athletes had a low average, which affects the efficiency of playing, such as movement evasion of opponents or slow dribbling, causing the results of the competition not to be as planned. Moreover, the coach's lack of a systematic and effective agility training program makes athletes less agile.

According to these problems, the researcher is conscious of the importance of physical fitness in terms of agility in the football players of the National Sports University, Yala Campus, which should have a training principle that involves moving and changing directions, which is consistent with Phonchiwin (2015) stated that should be practiced agility training for football players both with a ball and without a ball through applying the principles of sports science to training so that athletes can play football more effectively.

The researcher, as an assistant coach for the football team at the National Sports University, Yala Campus, is interested in studying the effects of training with a combined training program because it is training that has a variety of movement patterns and various directions for use in the competition of football team athletes National Sports University, Yala Campus.

1.1 Research objectives

1. To develop a combined training program on the agility of football players.
2. To compare the agility within a traditional agility program group and a group of football players who practiced a combined training program created by the researcher before and after training.
3. To compare the agility after training between a traditional agility program group and a group of football players who practiced a combined training program created by the researcher before and after training.

2. Research methods

This research is an experimental research. The researcher conducted the experiment according to the research design Pretest Posttest Control Group Design (Gall, Borg and Gall. 1996). The sample group used in this research included male football players from the National Sports University, Yala campus; a total of 30 people were obtained from purposive sampling. The sample in research has to train eight weeks, three days per week, 1 hour and 5 minutes per day, training on Monday, Wednesday, and Friday from 4:30 to 5:35 p.m.

2.1 Methods for dividing sample groups

1. There are 30 male football players from the National Sports University, Yala Campus.
2. Test agility with the SEMO Agility Test (The Sports Science Office, Department of Physical Education. Ministry of Tourism and Sports, 2017) in a total sample group of 30 people.
3. Arrange the agility test results from the lowest to the highest running time of 30 male football players.
4. Then, the matching method divided the sample into two groups of 15 people each (even numbers and odd numbers). This method ensured that the two groups had no different or similar abilities before training.

5. Analyze the data of both groups before the training using statistics Mann Whitney U-Test (Srisa-at, 1995).
6. Randomize the two groups of samples to be the experimental group and the control group by drawing lots. It appears that Group 1 was trained using the traditional agility training program. Meanwhile, the second group trained with a combined training program created by the researchers.

Data analysis, the researcher analyzed the obtained data using a computer program as follows:

1. 1 Statistical analysis to find the mean (Mean) and standard deviation (Standard deviation) of the control group and experimental group
2. 2 Compare the differences in agility training results within the control and experimental groups before and after training using The Wilcoxon Signed–Rank Test statistics.
3. 3 Compare the differences in agility training results between the control and experimental groups before and after training using Mann – Whitney U-test statistics.

3. Research results

1. Development of a combined training program that affects the agility of football athletes. It has passed the quality inspection of the training program by 5 experts. It was found that the evaluation of the appropriateness of the combined training program was at 95.00 percent, which was appropriate and usable.

2. Comparison of differences in agility training results within the control group and the experimental group before training and after training for 8 weeks found that the agility of the football players in the experimental group after training was better than before training at statistically significant at the .05 level as shown in Table 1 - Table 2

Table 1: Differences in agility training results within the control group before training and after 8 weeks of training.

Period of training	**N**	**control group**			
		Mean	**SD.**	**Z**	**P**
Before training (C_1)	15	13.907	.397	-3.408	.001*
After training (C_2)	15	12.557	.663		

*(P<.05)

Table 2: Differences in agility training results within the experimental group before and after 8 weeks of training.

Period of training	**N**	experimental group			
		Mean	**SD.**	**Z**	**P**
Before training (E_1)	15	13.914	.421	-3.408	. 001*
After training (E_2)	15	12.095	.293		

*(P<.05)

3. Comparing the differences in the results of agility training between the control group and the experimental group before and after training, the two groups found that the agility of football players after training between the experimental and control groups was better than before training at statistically significant at the .05 level as shown in Table 3.

Table 3: shows the agility test results of football athletes before training and after 8 weeks of training.

Group	N	The result of test							
		Before training				After training			
		Mean	SD.	Z	P	Mean	SD.	Z	P
Control group (C)	15	13.907	.397	.000	1.000	12.557	.663	-2.13	.033*
Experimental group (E)	15	13.914	.421			12.095	.293		

*(P<.05)

4. Discuss the results

Research results on the effects of a combined training program on the agility of football players. There are issues brought up for discussion according to the research objectives as follows:

1. The first research objective is to develop a combined training program that affects the agility of football players. The researcher led the combined training program with five experts to check the quality of the tools and made improvements according to recommendations from the experts. The suitability of the training program was 95 percent. After that, the combined training program created by the researcher was pilot-tested with a group studying football. In order to be more appropriate and efficient before putting it into practice with the sample group.

2. From the second research objective, compare the agility of football players within the control group and the experimental group before and after training. The research results found that after eight weeks of training, both groups of football players had significantly better mean agility than before training at the .05 level. This research shows that athletes who train in combinations follow the principles and training program. Moreover, the movement changes the direction of the feet faster, controlling the body's posture to be balanced. Therefore, these are combinations of training that improve football athletes' agility. Consistent with Kamutsri (2017) stated that practicing agility is necessary to have basic physical fitness training to connect with agility, especially must-have muscle strength training, power, speed, and the nervous system's response. Moreover, it must be trained in an anaerobic, which is the critical energy for muscles to contract and exert force quickly. These things affect the efficiency of the body's movement when changing direction quickly. Agility can be training many methods; each method allows the athlete to use speed of movement and change of direction. In training, the coach must set clear targets according to the needs of development and suit the readiness of the athletes' physical fitness at that time and must be consistent with the training plan that has been set because training to develop agility requires the body to contract muscles with speed or with a lot of force. Therefore, there is an easy chance of injury. For training to be effective, the body must be in a state without fatigue and have warmed up well. Moreover, agility training emphasis should be placed on footwork. The intensity, set, and duration of training must be determined per the need for use in various sports. Focus on distances of 5 - 10 meters and then change direction by setting goals for 3 - 5 sets; for each training set, the athletes must control their bodies to have balance. Set the direction of movement forward, sideways, and backward to be as consistent with each sport as possible. According to Damtae (2011), agility training must involve physiological principles in order to make the body more agile which consists of the muscular system, coordination system in muscle work, and nervous system including energy systems. These systems must work together well. Consistent with the research results of Insuwanno (2017), studied and compared the effects of using a combined training program on the agility of female volleyball players. This study found that training with a combined training program can significantly improve agility at the .01 level.
However, in the control group, although not trained according to the appropriate principles, after eight weeks of traditional training, the agility test results of the football players were on average better than before. It shows that when the body receives movement and regular agility training over eight weeks, it can develop agility as well, in line with Thani (2020), who stated that movement in the body can also improve physical fitness and sports skills.

3. The third research objective compares the agility of football players after training between the control and experimental groups. The study found that football players who trained with the combined training program had

better agility averages than those who trained with the traditional program. Because the researcher carried out the combined training program created through the correct principles, there was continuous training for eight weeks, three days per week, which resulted in improved agility, consistent with Chanapal's (2007) results of the training with an agility training program that affects the dribbling ability of football players aged 12-14 years. It was found that after the 4 and 8 training weeks, the experimental group had better dribbling ability than the control group. Moreover, the combined training program can improve athletes' agility performance by using maximum effort training and resting during sets, allowing the body to recover quickly. Consistent with the concept of Pholek (2018) studied specific movement training that affects agility in young male basketball players. It was found that the experimental group had an average agility better than the control group after six weeks of training at the 0.5 level. From the research results, it can be concluded that the effects of combined training programs on the agility of football players are very important to athletes. It can be seen that the 4 combined training programs that the researcher has created have studied the principles of training and the appropriateness of the duration of the training. As a result, the agility of the football players in the experimental group improved, requiring less time to move and change directions. Because agility will occur and it takes time to practice movement, change of direction, and control of the muscular and cognitive nervous system quickly and agile, response balance control must be effective. This is because almost all sports involve movement and some require rapid changes in direction. If the body has agility and good mechanics, it will help to play or compete in sports successfully.

Author Contributions: All authors contributed to this research.

Funding: Not applicable.

Conflict of Interest: The authors declare no conflict of interest.

Informed Consent Statement/Ethics Approval: Not applicable.

References

Pipitkul, K. (2018). Quality of questionnaire tools: Validity and Reliability in public administration research. *Academic and research journals Northeastern University, 8*(2), 104 – 106.

Poolsawat, K. (2005). Effects of plyometric training on the development of agility in football athletes aged 14 - 16 years. Bangkok:, Faculty of Education, Chulalongkorn University.

Krabounrat, C. (2002). *Principles and techniques of training*. Bangkok: Kasetsart University.

Phonchiwin, C. (2015). *Football coaching manual.* Bangkok: Sports Academic Division National Sports Authority of Thailand.

Kamutsri, T. (2017). *Strengthening physical fitness.* Bangkok: College of Sports Science and Technology Mahidol University

Phusi-on, S. (2015). *Application of SPSS to analyze research data.* (7th), Maha Sarakham: Taksila printing.

Thani, T. (2020). *Textbook for basic physical education course 4*. Nonthaburi: Emphan Publishing Company Limited.

Srisa-at, B. (1995). *Statistical methods for research, Volume 2. (2nd).* Bangkok: Suweeriyasan.

Yusob Damtae. (2011). *Effects of plyometric training on agility in football athletes.* Songkhla: Faculty of Education. Thaksin University.

Kongwongsa, W. (2019). Development of a speed and agility training program using ball training for football athletes at Maha Sarakham Rajabhat University, *Journal of Health Education, Physical Education and Recreation. 45*(2), 308-319.

Pholek, W. (2018). *Effects of specific movement training on agility in youth male basketball athletes.* Bangkok: Faculty of Sports Science Chulalongkorn University.

Phuthai, S. (2020). *Effects of the agility training program on the ability to move to play volleyball of upper primary school students in Chainat Province.* Bangkok: Faculty of Education National Sports University.

Khampromrat, S. (2018). Exercise. Retrieved from December 18, 2022 from https://popfitnesstudio. Blogspot.com

Chanapal, S. (2007). *Effects of supplementary training with an agility training program on the dribbling ability of football players aged 12 - 14 years.* Bangkok: Chulalongkorn University.

Office of Sports Science, Department of Physical Education, Ministry of Tourism and Sports. (2017). *Field physical fitness testing for football-futsal, volleyball, badminton.* Bangkok: Sun Packaging (2014) Company Limited.

Insuwanno, A. (2017). Effects of using a mixed training program on the agility of female volleyball players. Songkhla: Faculty of Sports Science Prince of Songkhla University.

Chanchuay, A. (2007). *Effects of M-shaped running training on the development of agility of tennis players.* Pattani: Faculty of Education Prince of Songkhla University Pattani Campus.

Cavaco, B., Sousa, N., Dos Reis, V. M., Garrido, N., Saavedra, F., Mendes, R., & Vilaça-Alves, J. (2014). Short-term effects of complex training on agility with the ball, speed, efficiency of crossing and shooting in youth soccer players. *Journal of Human Kinetics*, *43*(1), 105-112.

Galle, M. D., Borg, W. R., & Gall, J. P. (1996). Education Research an Introduction. 6th ed. New York: Longman Publishers.