



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

EFFECT OF SPEED AGILITY AND QUICKNESS TRAINING ON REACTION TIME OF WOMEN SOCCER PLAYERS

¹Mr. Sudipto Birbongshi, ²Dr. Ashok Kr Goon,

¹ Research Scholar, ²Professor DPESS Visva Bharati

¹Department of Physical Education and Sports Science, Bolpur, Santiniketan, India

Abstract: Introduction: These days Sports Science has become a vital part to make an athlete or any researcher success in all fields of Sports and Games. Without any scientific and systematic plan any sportsperson cannot achieve their highest level. In India sports scientist are also trying their level best through the scientific training to push athletes at their level best performance. Football is a family of team sports that involve, to varying degrees, kicking a ball to score a goal. Unqualified, the word football normally means the form of football that is the most popular where the word is used. **Significance of the study:** This study result may provide a reference of neuropsychological profile in Indian Football player. **Selection of subject:** For the present study total twenty (20) state level football players aged between 14-17 years were selected from Bahiri High school, Bolpur, Birbhum. **Selection of Variables:** After reviewing different studies the researcher stated that Reaction time plays an important role in sports performance especially for football hence the researcher selected this. **Selection of Training:** For the present study SAQ training (speed, agility, quickness) for 6 weeks (3 days in a week) was applied. **Results and discussion:** The mean pre-test and post-test data of experimental group on Reaction Time were 106.83 ± 11.56 and 92.56 ± 19.56 respectively. The mean pre-test and post-test data of Control Group on Reaction Time were 90.75 ± 10.36 and 85.25 ± 13.40 respectively. The t-ratio of pre-test and post-test on Reaction Time was 2.97 which was significant at 0.05 levels as the table value of t at 11 df was 2.20 which is less than tabulated value of t (2.97) at 0.05 levels. Thus, it may concluded that post-test score on Reaction Time was better than pre-test score of the subjects.

Index Terms – Speed, Agility, Quikness, Reaction Time

INTRODUCTION

These days Sports Science has become a vital part to make an athlete or any researcher success in all fields of Sports and Games. Without any scientific and systematic plan any sportsperson cannot achieve their highest level. In India sports scientist are also trying their level best through the scientific training to push athletes at their level best performance. Football is a family of team sports that involve, to varying degrees, kicking a ball to score a goal. Unqualified, the word football normally means the form of football that is the most popular where the word is used. Sports commonly called football include association football (known as soccer in some countries); gridiron football (specifically American football or Canadian football); Australian rules football; rugby football (either rugby league or rugby union); and Gaelic football. These various forms of football are known as football codes. There are a various references to traditional, ancient, or prehistoric ball games played in many different parts of the world.. By the end of the 19th century, distinct regional codes were already developing: Gaelic football, for example, deliberately incorporated the rules of local traditional football games in order to maintain their heritage. In 1888, The Football League was founded in England, becoming the first of many professional football competitions. During the 20th century, several of the various kinds of football grew to become some of the most popular team sports in the

world. Women's football became popular on a large scale at the time of the First World War, when employment in heavy industry spurred the growth of the game, much as it had done for men fifty years earlier. The most successful team of the era was Dick, Kerr's Ladies of Preston, England. The team played in the first women's international matches in 1920, against a team from Paris, France, in April, and also made up most of the England team against a Scottish Ladies XI in 1920, and winning 22–0. The India women's national football team is controlled by the All India Football Federation and represents India in women's international football competitions. The women's team resumed playing on 7 September 2012 after nearly a year-long hiatus.^[3] Under the global jurisdiction of FIFA and governed in Asia by the AFC, the team is also part of the South Asian Football Federation. The team was one of the best teams in Asia in the mid-70s to early 80s, when they became runners-up at 1979 and 1983 AFC Women's Asian Cup. Presently, the Indian team has won all the SAFF Women's Championship that they have participated in since 2010. The team has yet to participate in the FIFA Women's World Cup and Olympic Games, and failed to participate in the last 5 Asian Cups since 2003 at Thailand, as their last participation. Present ranking of the team according to FIFA Women's World Rankings is 57 and 13th among the Asian countries. SAQ training is speed, agility, and Quickness training. This method of training aims to improve an athlete's multi-directional movement by reprogramming their neuromuscular system. This type of training is very beneficial as it helps to improve your power in lateral, linear, horizontal movement, ground force reaction time, and brain signal efficiency, spatial awareness and motor skills. It also looks to improve the acceleration of your legs and arms as well as being able to slow it down. The traditional SAQ training method has changed over the course of the years because in recent times a lot more newer methods have been added to the equation. This would be such as resistant band training, plyometric training, balance strength training, pushing and pulling exercise and core strengthening exercise. Neuropsychology is a branch of psychology that is concerned with how the brain and the rest of the nervous system influence a person's cognition and behaviors. More importantly, professionals in this branch of psychology often focus on how injuries or illnesses of the brain affect cognitive functions and behaviors.

OBJECTIVE OF THE STUDY:

The purpose of the present study was to find out the effect of SAQ training on reaction time of women soccer players.

SIGNIFICANCE OF THE STUDY:

- i) This study result may provide a reference of neuropsychological profile in Indian Football player.
- ii) This study may be a good source of information about SAQ training.

METHODOLOGY:

Selection of subject:

For the present study total twenty (20) state level football players aged between 14-17 years were selected from Bahiri High school, Bolpur, Birbhum.

Selection of Variables:

After reviewing different studies the researcher stated that Reaction time plays an important role in sports performance especially for football hence the researcher selected this.

Selection of Training:

For the present study SAQ training (speed, agility, quickness) for 6 weeks (3 days in a week) was applied.

ANALYSIS: For the analysis of data Descriptive statistics and Paired t-test was applied to analysis the data. The level of significance was set at 0.05.

RESULTS AND DISCUSSION:

Result of reaction time of women soccer players is discussed in the tables below.

Table-1: Descriptive Statistics of Experimental Group on Reaction Time (N = 12)				
Variables	Groups	Mean	Std. Deviation (±)	Std. Error Mean (±)
Reaction Time *	Pre Test	106.83	11.56	3.34
	Post Test	92.56	19.56	5.65

The mean pre-test and post-test data of experimental group on Reaction Time were 106.83 ± 11.56 and 92.56 ± 19.56 respectively.

Table-2: Descriptive Statistics of Control Group on Reaction Time (N = 8)				
Reaction Time *	Pre Test	90.75	10.36	3.66
	Post Test	85.25	13.40	4.74

. The mean pre-test and post-test data of Control Group on Reaction Time were 90.75 ± 10.36 and 85.25 ± 13.40 respectively.

Table-3: Pair Sample t-Test of Experimental Group on Reaction Time (df = 11)				
Variables	Mean Differences	Std. Error of Differences	t-Ratio	Sig. Level (2-tailed)
Reaction Time	14.83	5.00	2.97*	0.013
*Significant at 0.05 levels $t_{.05}(11) = 2.20$				

The t-ratio of pre-test and post-test on Reaction Time was 2.97 which was significant at 0.05 levels as the table value of t at 11 df was 2.20 which is less than tabulated value of t (2.97) at 0.05 levels. Thus, it may concluded that post-test score on Reaction Time was better than pre-test score of the subjects.

Table-4: Pair Sample t-Test of Control Group on Reaction Time (df = 7)					
Variables	Mean Differences	Std. Error of Differences	t-Ratio	Sig. Level (2-tailed)	
Reaction Time	5.50	5.67	0.97	0.364	
*Significant at 0.05 levels $t_{.05}(7) = 2.36$					

Table-4 describes the t-Test of Control Group on Reaction Time. Here the t-ratio of pre-test and post-test on Reaction Time was 0.97 which was not significant at 0.05 levels as **the p-value was 0.002 which is less 0.05**. Thus, it may concluded that post-test score on Reaction Time was likely same as pre-test score.

Discussion :

The present study was conducted to find out the effect of SAQ (Speed, Agility and Quickness) training on Reaction Time of women soccer players. It was observed that there was significant differences ($t=2.97^*$) after pre and post-test of Reaction Time in case of Experimental Group but no significance differences ($t=0.97$) was found in control group. So it can be concluded that SAQ training has a great impact in improving Reaction Time of State level women soccer players.

References

1. Ando, S., Kida, N., & Oda, S. (2000). Central and peripheral visual reaction time of soccer players and nonathletes. *Perceptual and Motor Skills*, 92(3), 786-794. <https://doi.org/10.2466/pms.2001.92.3.786>
2. Jovanovic, M., Sporis, G., & Omrcen, D. (2011). Effects of speed, agility, quickness training method on power performance in elite soccer players. *The Journal of Strength & Conditioning Research*, 25(5), 1285-1292.
3. Lemmink, K. A., & Visscher, C. (2005). Effect of intermittent exercise on multiple-choice reaction times of soccer players. *Perceptual and Motor Skills*, 85-95. <https://doi.org/10.2466/pms.100.1.85-95>
4. Milanović, Z., Sporiš, G., & Trajković ve diğ. (2013). Effects of a 12 week saq training programme on agility with and without the ball among young soccer players. *Journal of Sports Science & Medicine*, 12(1), 97.
5. Parsons, L. S., & Jones, M. T. (1998). Development of Speed, Agility, and Quickness for Tennis Athletes. *Strength & Conditioning Journal*, 20(3), 14-19. [https://doi.org/10.1519/1073-6840\(1998\)0202.3.CO;2](https://doi.org/10.1519/1073-6840(1998)0202.3.CO;2)
6. Pesce, C., Tessitore, A., & Casella, R. (2007). Focusing of visual attention at rest and during physical exercise in soccer players. *Journal of sports sciences*, (11), 1259-70. <https://doi.org/10.1080/02640410601040085>
7. Sporis, G., Milanovic, Z., & Trajkovic, N. (2011) Correlation between speed, agility and quickness (SAQ) in elite young soccer players. *Acta kinesiologicala*, 5(2), 36-41.

