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Outcomes of six weeks game specific field training with mental practice strategy of selected physiological variables of college women soccer players

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Abstract

The researcher attempted to evaluate the impact of six weeks game specific field training with mental practice strategy on selected physiological variables of college women soccer players. The subject for this study were chosen from Kumaraguru College of Technology (KCT) and Kumaraguru College of Liberal Arts and Science (KCLAS) their age ranged from 18 to 23 years. Selected subjects were randomly allocated to two equal groups (n=15), group I underwent game specific field training with mental practice (GSMP) and group II acted as control group (CG). The game specific field training with mental practice was given to the experimental group for 3 days per week for the period of 6 weeks. The control group did not practice in any training except their routine work. The following variables were measured with standard test items: vital capacity and resting heart rate. Pre and post test was conducted. The vital capacity measured by Spiro meter in liters, resting heart rate measured by bio monitor in minutes. To find out the individual effect 't' test was applied at 0.05 level of significant. Further, the findings confirmed the game specific field training with mental practice is suitable protocol to bring out the desirable changes over the vital capacity and resting heart rate of college Women Football players.

Keywords: vital capacity and resting heart rate, game specific field training with mental practice

Introduction

Soccer, in its global evolution, has, in its current stage, as a standard feature in all high-performance teams, the increasing effort throughout the game to win. The game has become perfectly balanced, with very offensive, very collective, with a full rhythm, with complete athletic training with total physical commitment. This game dramatically demands the manifestation of the physical factor determined by the content of the effort. Increasing the driving density in every unit of time is explained by a high number of gaming actions. A player of the world's elite football teams performs in 1-2 minutes or even 3, speeds, a jump, an air duel or an individual technical action. In general, all the minutes of the game are active, and even if some effort can stagnate, it is done with the intent of amplifying it in the next stages.

Specific Skill Training

The motor qualities of a player is a predominance of velocity manifested in its forms of movement, execution, reaction; as well as the placement, movement, and handling of the ball. Speed is correlated with other driving qualities and is carried out in a resistance and force regime with the decisive role of skill in achieving technical-tactical combinations. Effort increment is represented primarily by the large number of official or preparatory meetings, their peculiarities, and stake. Physical demands made in the running at a total distance of 6-9 km from the majority of players in 80-140 speed actions maximum on a distance ranging from 700 - 2500 - 3000 m, in 40-80 direct physical contact with opponents, 80-120 jumping and other physical actions - turns, changes in direction, falls, jumping. In this paper, the issue of developing motor skills with the help of the specific means of football was pursued. The paper aims to bring the experts a methodical material, with scientific and systematized content, which is the basis of the training process, especially during the precompetitive and competitive period.

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Mental Practice Strategy

The psychological factors involved in athletic performance have long been of interest to athletes, coaches, sport psychologists and sports scientists. Empirical studies have largely focused on individual psychological factors and their influence on performance which includes confidence, motivation, attention, visualization, and psychosomatic skills (Gucciardi, Gordon, & Dimmock, 2009). Similarly, some studies indicated that the use of mental skills such as goal setting, imagery, relaxation, and self-talk are important areas in the field of sport psychology (Vealey, 2007; Williams & Harris, 2001). They also asserted that goal setting as attaining a specific standard of proficiency on a task, usually within a specified time limit can increase performance during competition. Speed, skill, and specific strength are the most critical driving qualities in the football game. Their specific means of development, as well as technical and tactical training, require dosing and management of training appropriate to age and competitive level. Moreover, imagery as using all the senses to re-create or create an experience in the mind helps athletes to perform better and increase self-confidence (Rattanakoses, *et al.*, 2009).

The results show that specific training, conducted during a competitive season with appropriate methods and means, improves the performance of the footballers.

Methodology

In order to address the hypothesis presented herein, we selected 30 soccer players from Kumaraguru Institution, (KCT & KCLAS) Coimbatore. Their age ranged from 18 to 23 years. The subjects were randomly assigned in to two equal groups namely, game specific field training with mental practice Group (*GSMP*) (n=15) and Control group (CG) (n=15). The respective training was given to the experimental group the 3 days of the weeks for the training period of six weeks. The control group was not given any sort of training except their routine. The evaluated performance vital capacity was assessed by Spiro meter with unit of measurements in

liters, and resting pulse rate was assessed by bio monitor with unit of measurements in minutes. The parameters were measured at baseline and after 6 weeks of complex training were examined. The intensity was increased once in two weeks based on the variation of the exercises. The training programme was lasted for 60 minutes’ session in a day, 6 days in a week for a period of 12 weeks’ duration. These 60 minutes included warm up for 10 minutes, 35 minutes game specific field training, 15 minutes mental strategy practice and 10 minutes warm down. The equivalent in game specific field training with mental practice is the length of the time each action in total 3 days per weeks.

Table 1: Computation of ‘t’ ratio on vital capacity on experimental group and control group (Scores in Numbers)

Groups	Pre test	Post test	Numbers	Magnitude of improvement	“T” Ratio
Experimental Group	3.54	3.86	15	9.03%	12.27*
Control group	3.56	3.59	15	0.84%	1.12

*significant level 0.05 level (degree of freedom 2.09, 1 and 19)

Table 1 reveals the computation of mean, standard deviation and ‘t’ ratio on selected variable are vital capacity of experimental group. The obtained ‘t’ ratio on vital capacity were 12.27 respectively. The required table value was 2.09 for the degrees of freedom 1 and 14 at the 0.05 level of significance. Since the obtained ‘t’ values were greater than the table value it was found to be statistically significant.

Further the computation of mean, standard deviation and ‘t’ ratio on selected variable for vital capacity of control group. The obtained ‘t’ ratio on vital capacity were 1.12 respectively. The required table value was 2.09 for the degrees of freedom 1 and 14 at the 0.05 level of significance. Since the obtained ‘t’ values were lesser than the table value it was found to be statistically not significant.

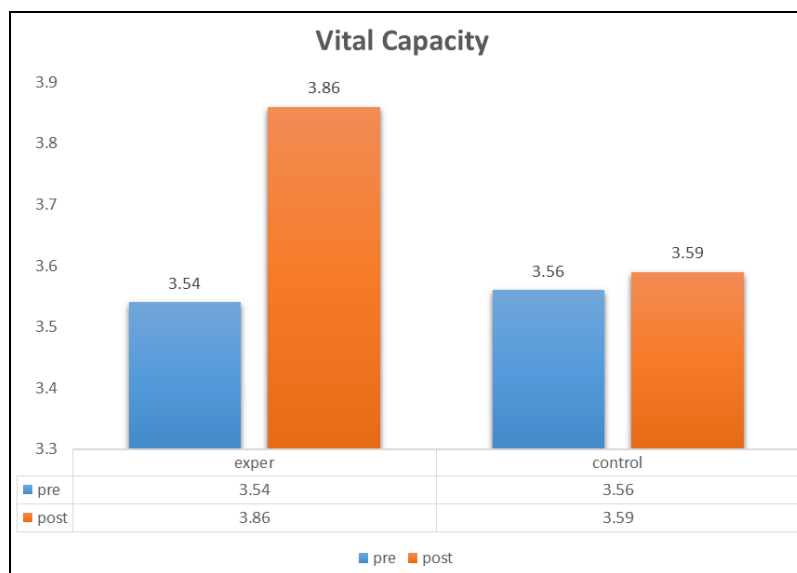


Fig 1: Bar diagram showing the mean value on vital capacity of soccer players on experimental and control group

Table 2: Computation of ‘t’ ratio on resting pulse rate on experimental group and control group (Scores in Numbers)

Groups	Pre test	Post test	Numbers	Magnitude of improvement	“T” Ratio
Experimental Group	73.40	68.15	15	7.15%	16.23*
Control group	73.75	73.55	15	0.27%	0.53

*significant level 0.05 level (degree of freedom 2.09, 1 and 19)

Table 1 reveals the computation of mean, standard deviation and 't' ratio on selected variable for resting pulse rate of experimental group. The obtained 't' ratio on resting pulse rate were 16.23 respectively. The required table value was 2.09 for the degrees of freedom 1 and 14 at the 0.05 level of significance. Since the obtained 't' values were greater than the table value it was found to be statistically significant.

Further the computation of mean, standard deviation and 't' ratio on selected variable for resting pulse rate of control group. The obtained 't' ratio on resting pulse rate were 0.53 respectively. The required table value was 2.09 for the degrees of freedom 1 and 14 at the 0.05 level of significance. Since the obtained 't' values were lesser than the table value it was found to be statistically not significant.

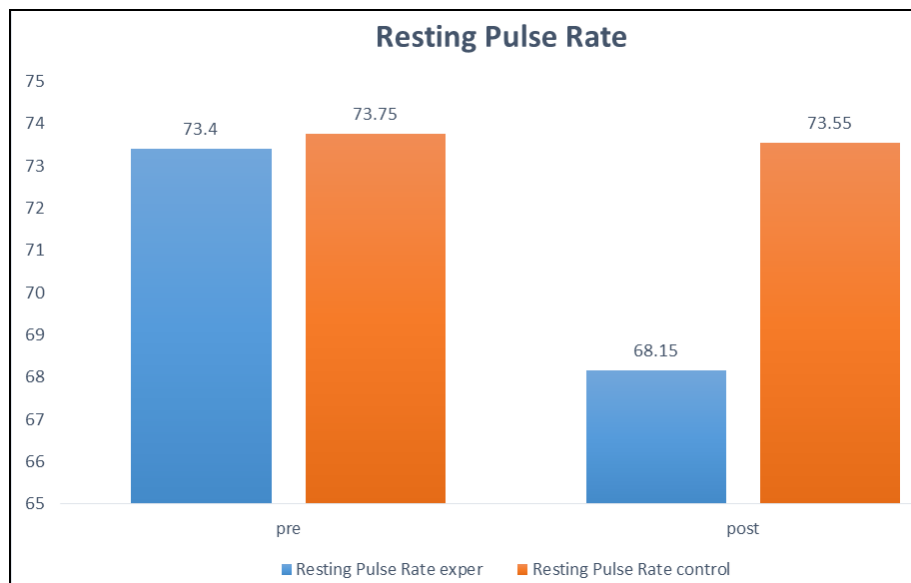


Fig 2: Bar diagram showing the mean value on resting pulse rate of soccer players on experimental and control group

Discussion and Findings

The current study investigated the influence of six week's game specific skill training with mental strategy practice on the physiological variables of college level women soccer players. The game of soccer game most of the players specifically in college teams the soccer players would have a good knowledge about skill performing and enhancing modalities but here the researcher wants to give a try on game specific training with mental strategy the successful of the competitions. The results of this study indicated that game specific skill training with mental strategy practice is more efficient to bring out desirable changes over the selected variables of women soccer players. Hill-Haas, S. V., *et al.*, (2011) [2]. Physiology of small-sided games training in football. *Sports medicine*, 41(3), 199-220. Selvakumar &, R., & Vigneshwaran, G. Influence of Game-Specific Field Training on Speed Among Cricket Players. Kruk, M., *et al.*, (2017) [5]. Mental strategies predict performance and satisfaction with performance among soccer players. *Journal of human kinetics*, 59, 79. Omar-Fauzee, M. S., *et al.*, (2012) [7]. Mental toughness among footballers: A case study. *International Journal of Academic Research in Business and Social Sciences*, 2(1), 639. Hence, it was concluded that for vital capacity and resting pulse rate was improved due to the influence of six weeks game specific training with mental practice strategy among college level women soccer players.

Conclusions and Recommendations

From the results of the study and discussion the following conclusions were drawn.

1. The six weeks of game specific skill training with mental strategy practice have been significantly improved vital capacity of college level soccer players.
2. The six weeks of game specific skill training with mental strategy practice have been significantly improved resting

pulse rate of college level soccer players.

3. Based on the result of the studies concluded results it was a prompt one to use the college level women soccer players and further studies may conducted for school girls also and it may be carried for longer time scale to derive the better results.

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