

BHARATHIAR NATIONAL JOURNAL OF PHYSICAL EDUCATION AND EXERCISE SCIENCES

Effect of Small-Sided Game Intervention on Speed and Self-Confidence Among Men Intercollegiate Soccer Players

S.Jayakumar¹, Mathew Issac², B. Sujatha³, R. Saravana Prabha⁴, S. Archana Mani Malathi⁵

1 Assistant Professor, Department of Physical Education, Tamil Nadu Physical Education and Sports University, Chennai, Tamil Nadu, India.

2 Head & Assistant Professor, Department of Physical Education, Mar Dionysius College Pazhanji Aided College, Affiliated to Calicut University, Kerala, India. 3 Director of Physical Education, Sri GVG Visalakshi College for Women, Udumalpet, Tirupur, Tamil Nadu, India.

4 Head & Associate Professor, Department of Physical Education, Faculty of Education, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, Tamil Nadu, India

5 Assistant Professor, Department of Physical Education, Faculty of Education, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, Tamil Nadu, India

Abstract

Aim of the present studywas to find the impact of Small-Sided Game intervention programme on speed and self-confidenceamong intercollegiate soccer players. The 30 participants (age range, 18-24) were recruited from Bharathiar University, Coimbatore, Tamil Nadu, India by random sampling method. Selected participants further randomly divided into two groups each 15 participants. Group I as Experimental group underwent 12 weeks of Small-Sided Game. However, Group II act as control group. Speed and Self-confidence was selected as dependent variable for this study. 50 meters dash was used to test the speed of the participants andSelf-confidence was assessed by Agnihotri's Self Confidence Inventory (ASCI), developed by Dr. Rekha Agnihotri. In this study we used Probability sampling technique were used. Based on that Parametric Statistics were selected such as Descriptive statistics used to find the nature of the data, paired sample t test used to find the improvement between pre and post test and Univariate Analysis of Covariance (ANCOVA) used to find the difference among the groups. Statistical significance was established as P < 0.05. Concluded that there is significance improvement exists between pre and post test mean on speed and self-confidence among experimental group.

Keywords: Small-Side Game, Speed, Self-confidence, and Soccer players.

INTRODUCTION

Small-sided games (SSGs) also referred to as skill-based conditioning game (Gabbett, 2006) or game-based training (Gabbett, Jenkins, & Abernethy, (2009) are modified game formats in which the coach changes the number of players, ground size, (Davids, Araújo, Correia, & Vilar, 2013) coach encouragement, training regimen (continuous training (Hill-Haas, vs interval

Dawson, Impellizzeri, & Coutts, 2011) or specific game rules to introduce a tactical difficulty to team sports participants(Davids, Araújo, Correia, & Vilar, 2013; Hill-Haas, Dawson, Impellizzeri, & Coutts, 2011). The modification of these constraints has an immediate impact on players' responses, such tactical behaviours (Clemente, Ramirezas Campillo, Nakamura, & Sarmento, 2021), technical performance (Clemente, & Sarmento, 2020), or

physical and physiological demands (Clemente, Ramirez-Campillo, Sarmento, Praça, Afonso, Silva, & Knechtle, 2021).

For all positions in soccer, speed is essential (Taskin, 2008). In sports, speed is a critical aspect in deciding success (Kalinowski, Jerszynski, & Nowakowska, 2021). Selfconfidence is a broad phrase that refers to an athlete's belief in his or her capacity to succeed in sports. It is most commonly quantified as trait sport confidence (Vealey, 1986).

It seems evident from the literature that there are many different training protocols According to Meckel, Gefen, Nemet, & Eliakim, (2012), conducted with Sprint training, Upton, (2011) conduct with resisted sprinting & assisted sprinting, Jovanovic, Sporis, Omrcen, & Fiorentini, (2011) with SAQ drills, and Diallo, Dore, Duche, & Van Praagh, (2001)with plyometrics trainingconducted to improve speed ability and also Shaker, Nehma, & Odah, (2021) found improvement on self-confidence and tactical knowledge of football players. In this present study SSGs were used as treatment variable to improve self-confidence and the speed among intercollegiate men Soccer players.

Materials and methods

Participants

The 30 participants (age range, 18-24) were recruited from Bharathiar University, Coimbatore, Tamil Nadu, India by random sampling method. Selected participants further randomly divided into two groups each 15 participants All participants are required to return a signed informed consent letter prior to their participation in this trial.

Measures

Speed was selected as dependent variable for this study. 50 meters dash was used to test the speed of the participants (Mohammad, & Tareq, 2016). The test involves running a single maximum sprint over 50 metres while keeping track of the timing. A complete warm-up should be given, with some practise starts and accelerations thrown in for good measure. Begin in a standing position with one foot in front of the other (hands need not contact the ground). Behind the starting line, the front foot must be. The starter delivers the orders "set" and "go" once the subject is ready and unmoving. The tester should give tips for increasing speed (such as staying low and driving hard with the arms and legs) and encourage the participant not to slow down until reaching the finish line (Wood, 2010).

Dr. Rekha Agnihotri created the Agnihotri Self-Confidence Inventory (ASCI). This questionnaire has 56 items that are simple to score by hand. For making cross (X) to wrong response to item number 2, 7, 23, 31, 40, 41, 43, 44, 45, 53, 54, 55, and for making cross (X) to right response to the rest of the items, a score of 1 is given. As a result, the lower the score, the higher the level of self-confidence, and vice versa (Ghaonta, 2015). The author has given the following classification criteria: 7 and below- very high self-confidence, 8-19 - High self-confidence, 20-32 - Average self-confidence, 33-44 - Low self-confidence and 45 and above very low selfconfidence.

Procedures

Initially Pre-test were conducted for experimental and control groups on Speed. After that experimental group underwent the SSGs intervention. This study was completed Three days per week over Twelve weeks with 60-90 mins of each session. After the 12 weeks of training periods the post test were conducted for all the participants.

Intervention

Participants in the experimental group performed the SSGs intervention for 60-90 min per day, three alternative days per week for twelve weeks. The SSGs interventions was done as follows: Start with warm up' Dynamic Warm-Up, playing duration of the SSG (i.e., 3 bouts x 4 minutes with a rest between bouts of 3 minutes (Rampinini, Impellizzeri, Castagna, Abt, Chamari, Sassi, & Marcora, 2007). Scores were considered valid only if made with the first touch, and in all SSGs the relative pitch size was 85 m2. Goalkeepers were considered for the calculation of the relative pitch size, while floaters (players off the field) were excluded. All SSGs were played with coach encouragement and without the offside **Results and Discussion**

rule being enforced (Arcos, Vázquez, Martín, Lerga, Sánchez, Villagra, & Zulueta, 2015). Control group did not under went any Specific activity during the training period (Sethu, & Ramakrishnan, 2020; Ramakrishnan, & Sethu, 2018).

Design and Statistical Analysis

In this study pre and post randomised control design was used. In this study we used Probability sampling technique were used. Based on that Parametric Statistics were selected such as Descriptive statistics used to find the nature of the data, paired sample t test used to find the improvement between pre and post test and Univariate Analysis of Covariance (ANCOVA) used to find the difference among the groups. Statistical significance was established as P < 0.05.

Speed												
Group	Test	Mean	N	SD	t test	df	P value					
Experimental Group	Pre-test	7.67	15	0.12	21.33	14	0.00					
	Post test	7.00	15	0.14								
Control Group	Pre-test	7.71	15	0.14	0.37	14	0.72					
	Post test	7.71	15	0.12								
Self-confidence												
Experimental Group	Pre-test	29.13	15	1.25	60.65	14	0.00					
	Post test	17.80	15	1.70								
Control Group	Pre-test	29.20	15	0.94	0.37	14	0.71					
	Post test	29.27	15	1.27	1							

Table 1 Descriptive Statistics & paired sample t test.

Speed

Paired sample t test value of experimental group is P=0.00 which is less than the P=0.05. The result indicates there is a significance improvement between pre and post-test mean among experimental group participants and control group is P=0.72 which is greater than the P=0.05 it clearly shows that there is no significant improvement between pre and post test mean on

speed among the control group participants at 0.05 level of significance.

Self-confidence

Paired sample t test value of experimental group is P=0.00 which is less than the P=0.05. The result indicates there is a significance improvement between pre and post-test mean among experimental group participants and control group is P=0.71 which is greater than the P=0.05 it

clearly shows that there is no significant improvement between pre and post test mean on

self-confidence among the control group participants at 0.05 level of significance.

Figure 1 & 2 shows the mean value of Speed and Self-confidence pre and post test among experimental and





Table 2 Univariate ANCOVA Comparing two groups

Variable	Adjusted Post-test Mean		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Speed	Experimental Group	Control Group	3.51	1	3.51	398.33	0.00	0.937
	7.01	7.70	0.24	27	0.09			
Self- confidence	17.84	29.23	971.26	1	971.26	2075.78	0.00	0.987
			12.63	27	0.468			

Table 2 shows that the univariate ANCOVA value on Speed P=0.00 which is less than the P=0.05 and Self-confidence P=0.00 which is less than the P=0.05, it indicates that there is significance improvement difference exist between experimental and control group on speed and self-confidence at 0.05 level of significance.

Figure 3& 4 shows the adjusted post-test mean value of Speed and Self-confidence among experimental and control Group.





The obtained results also supported by previous studies, According to Katis, & Kellis, (2009) found improvement on physical conditions among soccer players. Karahan, (2020)found improvement on physical performance among soccer players, and Nehma, & Odah, (2021) found improvement on self-confidence among football players

Conclusion

 Statistical results shows that the 12 weeks of SSGs interventionhad found significant improvement on speed and self-

References

- [1] Arcos, A. L., Vázquez, J. S., Martín, J., Lerga, J., Sánchez, F., Villagra, F., & Zulueta, J. J. (2015). Effects of smallsided games vs. interval training in aerobic fitness and physical enjoyment in young elite soccer players. PloS one, 10(9), e0137224.
- [2] Clemente, F. M. (2016). Small-sided and conditioned games in basketball training:
 a review. Strength and conditioning journal, 38(3), 49-58.
- [3] Clemente, F. M., & Sarmento, H. (2020). The effects of small-sided soccer games on technical actions and skills: A systematic review. Hum. Mov, 21, 100-119.
- [4] Clemente, F. M., Ramirez-Campillo, R.,Sarmento, H., Praça, G. M., Afonso, J.,Silva, A. F., ... & Knechtle, B. (2021).

confidence among intercollegiate men soccer players.

- Statistical results shows that the control group had found no significant improvement on speed and selfconfidence among intercollegiate men soccer players.
- Experimental and Control group had shows significant improvement difference exist on improving speed and selfconfidence among the intercollegiate men soccer players.

Effects of small-sided game interventions on the technical execution and tactical behaviors of young and youth team sports players: A systematic review and meta-analysis. Frontiers in Psychology, 12, 1501.

- [5] Clemente, F.M, Ramirez-Campillo, R., Nakamura, F. Y., & Sarmento, H. (2021). Effects of high-intensity interval training in men soccer player's physical fitness: A systematic review with meta-analysis of randomized-controlled and non-controlled trials. Journal of Sports Sciences, 39(11), 1202-1222.
- [6] Davids, K., Araújo, D., Correia, V., & Vilar, L. (2013). How small-sided and conditioned games enhance acquisition of movement and decision-making skills. Exercise and sport sciences reviews, 41(3), 154-161.

- [7] Diallo, O., Dore, E., Duche, P., & Van Praagh, E. (2001). Effects of plyometric training followed by a reduced training programme on physical performance in prepubescent soccer players. Journal of sports medicine and physical fitness, 41(3), 342.
- [8] Gabbett, T. J. (2006). Skill-based conditioning games as an alternative to traditional conditioning for rugby league players. The Journal of Strength & Conditioning Research, 20(2), 306-315.
- [9] Gabbett, T., Jenkins, D., & Abernethy,
 B. (2009). Game-based training for improving skill and physical fitness in team sport athletes. International Journal of Sports Science & Coaching, 4(2), 273-283.
- [10] Ghaonta, I. (2015). Self-Confidence Of Senior Secondary School Students of Shimla District. International Journal of Recent Advances In Multidisciplinary Research, 2(12), 1035-1039.
- [11] Hill-Haas, S. V., Dawson, B., Impellizzeri, F.
 M., & Coutts, A. J. (2011). Physiology of small-sided games training in football.
 Sports medicine, 41(3), 199-220.
- [12] Hill-Haas, S. V., Dawson, B., Impellizzeri, F.M., & Coutts, A. J. (2011). Physiology of

small-sided games training in football. Sports medicine, 41(3), 199-220.

- [13] Jovanovic, M., Sporis, G., Omrcen, D., & Fiorentini, F. (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.
- [14] Kalinowski, P., Jerszyński, D., & Nowakowska, M. (2021). Level of speed abilities of young football players in various training periods. Health, sport, rehabilitation, 7(2), 57-64.
- [15] Karahan, M. (2020). Effect of skill-based training vs. small-sided games on physical performance improvement in young soccer players. Biology of Sport, 37(3), 305.
- [16] Katis, A., & Kellis, E. (2009). Effects of small-sided games on physical conditioning and performance in young soccer players. Journal of sports science & medicine, 8(3), 374.
- [17] Meckel, Y., Gefen, Y., Nemet, D., & Eliakim, A. (2012). Influence of short vs. long repetition sprint training on selected fitness components in young soccer players. The Journal of Strength & Conditioning Research, 26(7), 1845-1851.

- [18] Mohammad, A., & Tareq, A. (2016). The relationship between body fat percentage with speed, agility and reaction time of male football players of Bangladesh. International Journal of Sport Culture and Science, 4(4), 453-460.
- [19] Ramakrishnan, R., & Sethu, S. (2018).
 Effects of Yogasanas practice on motor skills among school children. children, 14(4), 581.
- [20] Rampinini, E., Impellizzeri, F. M., Castagna, C., Abt, G., Chamari, K., Sassi, A., & Marcora, S. M. (2007). Factors influencing physiological responses to small-sided soccer games. Journal of sports sciences,25(6), 659-666.
- [21] Sarmento, H., Clemente, F. M., & Harper,
 L. D. (2018). Teoldo da Costa I., Owen
 A., Figueiredo AJ.Small sided games in soccer-a systematic review, International
 Journal of Performance Analysis in Sport, 18(5), 693-749.
- [22] Sethu, S., & Ramakrishnan, R. (2020).Physical Activity intervention on Locomotor Skills among school children-Pre and post randomised controlled study.

- [23] Shaker, A. P. H., Nehma, A. P. A., & Odah, K. (2021). The effect of (SSG) exercises on self-confidence and tactical knowledge of football players. Karbala Magazine of Physical Edu. Seiences, 6(2).
- [24] Taskin, H. (2008). Evaluating sprinting ability, density of acceleration, and speed dribbling ability of professional soccer players with respect to their positions. The Journal of Strength & Conditioning Research, 22(5), 1481-1486.
- [25] Upton, D. E. (2011). The effect of assisted and resisted sprint training on acceleration and velocity in Division IA female soccer athletes. The Journal of Strength & Conditioning Research, 25(10), 2645-2652.
- [26] Vealey, R. S. (1986). Conceptualization of sport-confidence and competitive orientation: Preliminary investigation and instrument development. Journal of sport psychology, 8(3).
- [27] Wood, R. J. (2010). Complete Guide toFitness Testing. Topendsports. com.Retrieved 7 March 2016.

Funding

This study was not funded by any grant **Acknowledgements**

The authors would like to thank every participant for his effort and time.

Conflict of interest

How to Cite this Article

S.Jayakumar, Mathew Issac, B. Sujatha, R. Saravana Prabha, S. Archana Mani Malathi (2022), Effect Of Small-Sided Game Intervention On Speed And Self-Confidence Among Men Intercollegiate Soccer Players, Bharathiar National Journal of Physical Education and Exercise Sciences 12(4) (2021) 38 – 45. None of the authors have any conflicts of interest to declare.

About the License

The text of this article is licensed under a Creative Commons Attribution 4.0 International License