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# Impact on Different Dimensional Training with SSG on Soccer Players

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**ABSTRACT**

The present study aimed to examine the impact on different dimensional training with ssg on soccer players. **Methodology:** To achieve the purpose of the study forty five (N=45) college football players were selected as subjects from Affiliated Colleges of Bharathiar University, Coimbatore, Tamilnadu. The subject's ages ranged between 17 to 25 years. The selected forty five subjects were divided into three equal groups consisting of fifteen (n=15) each, Experimental Group I which underwent Technical Training with small sided game (SSG), Experimental Group II which underwent Tactical Training with small sided game (SSG) and Control Group III. The subjects in the control group will not undergo any sort of training except their routine work. The experimental group was treated with Technical Training with small sided game (SSG) and Tactical Training with SSG for four alternative days per week for a period of twelve weeks. **Result:** Data collected from the three groups before and after the training period was statistically examined for significant by using dependent 't' test. Further, the group means gains recorded by the various groups in the pre-test and post-test was tested for significance by applying paired 't' test was applied to determine whether the training programs produced any significantly improvements in selected variables after 12 weeks of training. The level of significance was fixed at 0.05. The results indicated that experimental groups (Technical Training with SSG and Tactical Training with SSG) improved significantly at the end of twelve weeks of training. **Conclusion:** The experimental groups were showed highly significant when compared with control group. It was concluded that the Technical Training with SSG and Tactical Training with SSG achieves an optimum level of physical fitness, skill performance variables and playing ability of soccer players over twelve weeks of training.

**Keywords**: Technical Training, Tactical Training, SSG, Physical Fitness, Skill performance and Playing Ability.

## INTRODUCTION

**Soccer:** Game in which two teams of 11 players, using any part of their bodies except their hands and arms, try to maneuver the ball into the opposing team's goal. Only the goalkeeper is permitted to handle the ball and may do so only within the penalty area surrounding the goal. The team that scores more goals wins. Football is the world's most popular ball game in numbers of participants and spectators.

**Technical training:** in football refers to drills and exercises focused on improving a player's specific skills, including ball control, passing, dribbling, shooting, and tactical awareness. It helps players to

develop the fundamental techniques required to excel in various positions on the field. Eg: Ball Control, Passing, Shooting, Heading, Tactical Awareness, Footwork and Agility.

**Tactical training:** Tactical training in football focuses on developing a players or team's understanding of game strategies, positioning, decision-making, and coordination with teammates. It aims to enhance the ability to read the game, anticipate opponents' movements, and make smart decisions under pressure. Tactical awareness is critical for both individual players and teams to succeed at any level of the game. eg: Positioning and Shape, Attacking Tactics, Defensive Tactics, Transition Play, Game Management, Positional Play, Pressing Drill, Positional Play Drill, Counterattacking Drill, Zonal Marking Drill.

**Small-sided games:** Small - sided games (SSGs) in football are a highly effective training method where fewer players were involved than in a regular 11v11 match. These games typically range from 2v2 to 8v8 and are designed to focus on specific skills, tactics, and aspects of the game in a more concentrated, faster-paced environment. SSGs are great for enhancing decision-making, technical abilities, tactical awareness, and physical conditioning.

**Physical fitness:** is the ability to perform daily activities with vigor and alertness, without undue fatigue, and with ample energy to enjoy leisure-time pursuits. It encompasses various components like cardiorespiratory endurance, muscular strength, muscular endurance, flexibility, and body composition. Achieving and maintaining physical fitness involves regular physical activity, a healthy diet, and sufficient rest.

**Skill performance:** encompasses the effective application of learned techniques in response to game situations, crucial for both scoring and defending. Key skills include passing, ball control, dribbling, and shooting, which collectively influence team coordination, confidence, and momentum. Physical fitness, tactical awareness, and mental fortitude also play vital roles in overall performance.

**Playing ability:** encompasses a wide range of skills, including technical prowess, tactical awareness, physical fitness, and strategic thinking. Key skills include ball control, passing, shooting, dribbling, and tactical understanding. Additionally, physical attributes like speed, agility, endurance, strength, and flexibility are crucial for success.

## METHODOLOGY

The purpose of this study was to find out the “Impact on different dimensional training with ssg on soccer players” in Bharathiar University, Coimbatore, Tamilnadu. The forty five (N-45) subjects were randomly selected from the Bharathiar University. It was decided to select trained students because untrained may get negative effects. So the investigator selected as subjects and they were allowed to participate in their routine training. Since the subjects were susceptible for changes, due to growth and daily activities during the period of training, N=45 students from Affiliated Colleges of Bharathiar University. Were selected with their willingness. The subjects were age between 17-25 years. The study was formulated as pre and post-test random group design, in which forty-five students were divided into three equal groups. The experimental group, in which the group I was (n=15) performed the technical training with SSG, group II was (n=15) performed tactical training with SSG and group III was (n=15) acted as a control group did not underwent any specific, except their routine activities. The experimental groups underwent technical training with SSG and tactical training with SSG for four alternative days per week for a period of twelve weeks. Data collected from the three groups before and after the training period were statistically tested for significance using dependent ‘t’ test. Further, the group means gains recorded by the various groups in the pre-test and post-test was tested for significance by applying

paired 't' test was applied to determine whether the training programs produced any significantly different improvements in selected variables after 12 weeks of training. at the 0.05 level of significance.

***Criterion Measures:*** It is evaluated skill performance variables that were chosen as the criterion measures for this study for testing.

**TABLE-I**
**CRITERION MEASURES**

| S. NO | CRITERION VARIABLES | TEST ITEMS | UNIT OF MEASUREMENTS |
|---|---|---|---|
| **SKILL PERFORMANCE VARIABLES** | | | |
| | Speed | 50 mts dash | In seconds |
| | Cardiovascular endurance | Copper's 12 min run / walk test | In meters |
| | Dribbling | Mor Christian Soccer Test | In Seconds |
| | Overall playing ability | Subjective rating | In point |

**RESULT:**

**TABLE -II**
**'t'- RATIO FOR FOOTBALL PLAYERS ON PASSING, SHOOTING, DRIBBLING AND OVERALL PLAYING ABILITY**

| Variable | Groups | Pre mean | Post mean | M. D | SEM | t |
|---|---|---|---|---|---|---|
| **Speed** | Experimental group I | 8.62 | 8.46 | 0.16 | 0.03 | **4.60*** |
| | Experimental group II | 8.56 | 8.46 | 0.10 | 0.04 | **2.52*** |
| | Control group | 8.58 | 8.69 | 0.11 | 0.09 | **1.33** |
| **Cardiovascular endurance** | Experimental group I | 2407.67 | 2562.33 | 154.67 | 35.23 | **4.39*** |
| | Experimental group II | 2585.67 | 2668.40 | 82.73 | 25.71 | **3.21*** |
| | Control group | 2602.00 | 2595.33 | 6.67 | 19.88 | **0.33** |
| **Dribbling** | Experimental group I | 14.25 | 14.11 | 0.14 | 0.04 | **3.35*** |
| | Experimental group II | 14.18 | 13.79 | 0.39 | 0.07 | **5.21*** |
| | Control groups | 14.22 | 14.30 | 0.08 | 0.06 | **1.26** |
| **Overall playing ability** | Experimental group I | 4.93 | 6.06 | 1.13 | 0.29 | **3.90*** |
| | Experimental group II | 4.80 | 6.26 | 1.47 | 0.31 | **4.79*** |
| | Control groups | 4.73 | 4.33 | 0.40 | 0.25 | **1.57** |

(Significance at 0.05 level of confidence for df of 2 and 42, is 2.14)

The mean standard deviation and t-value were calculated for each outcomes measure as shown in Table-II. The result shows that the pre-test and post-test mean values of the Experimental group I (technical

training with SSG) for Speed (8.62 & 8.46), Cardiovascular endurance (2407.67 & 2562.33), Dribbling (14.25 & 14.11) and Overall playing ability (4.93 & 6.06), Experimental group II (tactical training with SSG) for Speed (8.56 & 8.46), Cardiovascular endurance (2585.67 & 2668.40), Dribbling (14.18 & 13.79) and Overall playing ability (4.80 & 6.26) respectively. In comparison, the Control group had mean values for Speed (8.58 & 8.69), Cardiovascular endurance (2602.00 & 2595.33), Dribbling (14.22 & 14.30) and Overall playing ability (4.73 & 4.33) respectively. The obtained dependent t-test value of Experimental group I on Speed (**4.60***), Cardiovascular endurance (**4.39***), Dribbling (**3.35***) and Overall playing ability (**3.90***), Experimental group II on Speed (**2.52***), Cardiovascular endurance (**3.21***), Dribbling (**5.21***) and Overall playing ability (**4.79***) and Control group on Speed (**1.33**), Cardiovascular endurance (**0.33**), Dribbling (**1.26**) and Overall playing ability (**1.57**) respectively. The table value required for a significant, with 42 and 2 degrees of freedom at a 0.05 level of confidence, was 2.14.

Since the obtained 't' test value for the Experimental group I and Experimental group II was greater than the table value (2.14), the results clearly indicated that the Speed, Cardiovascular endurance, Dribbling and Overall playing ability significantly improved due to the impact of technical training with SSG and tactical training with SSG among soccer players.

The table II, shows that technical training with small sided game (SSG) significantly improved in Speed and Cardiovascular endurance then the tactical training with small sided game (SSG) and control group and the tactical training with small sided game (SSG) significantly improved in Dribbling and Overall playing ability then the technical training with small sided game (SSG) and control group.

**FIGURE-I**
**BAR DIAGRAM SHOWING THE 't' VALUES OF EXPERIMENTAL AND CONTROL GROUPS ON SPEED AMONG SOCCER PLAYERS**

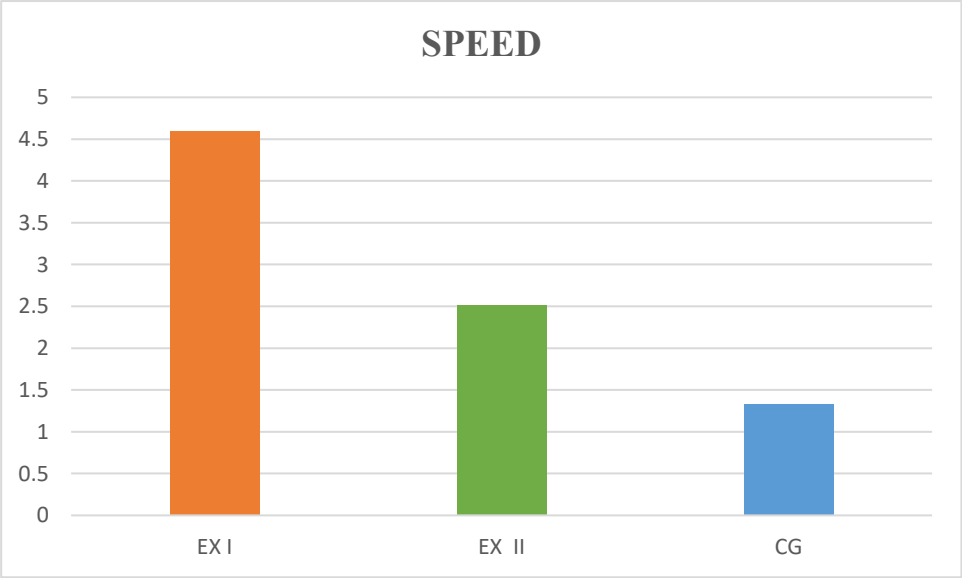


**FIGURE-II**
**BAR DIAGRAM SHOWING THE 't' VALUES OF EXPERIMENTAL AND CONTROL GROUPS ON CARDIOVASCULAR ENDURANCE AMONG SOCCER PLAYERS**

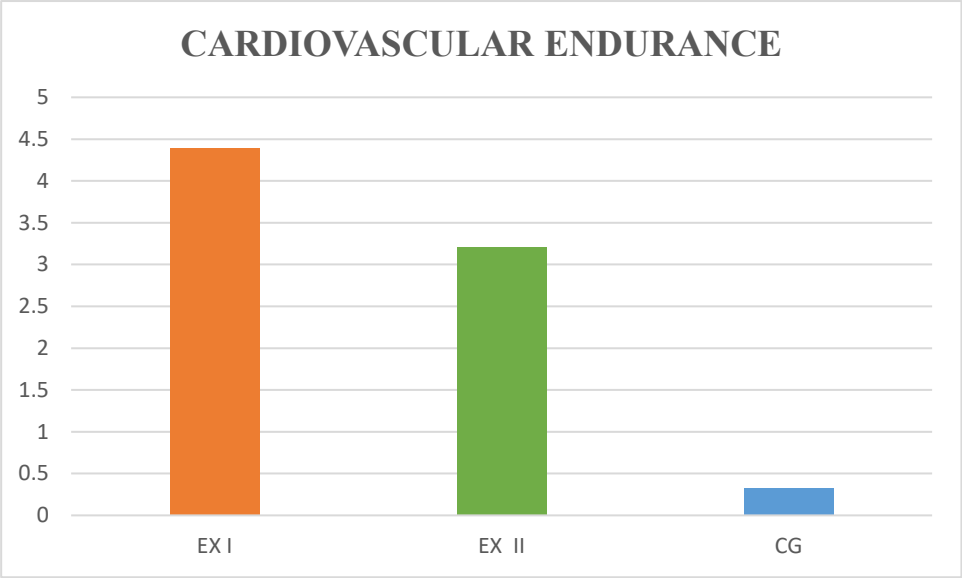



**FIGURE-III**
**BAR DIAGRAM SHOWING THE 't' VALUES OF EXPERIMENTAL AND CONTROL GROUPS ON DRIBBLING AMONG SOCCER PLAYERS**

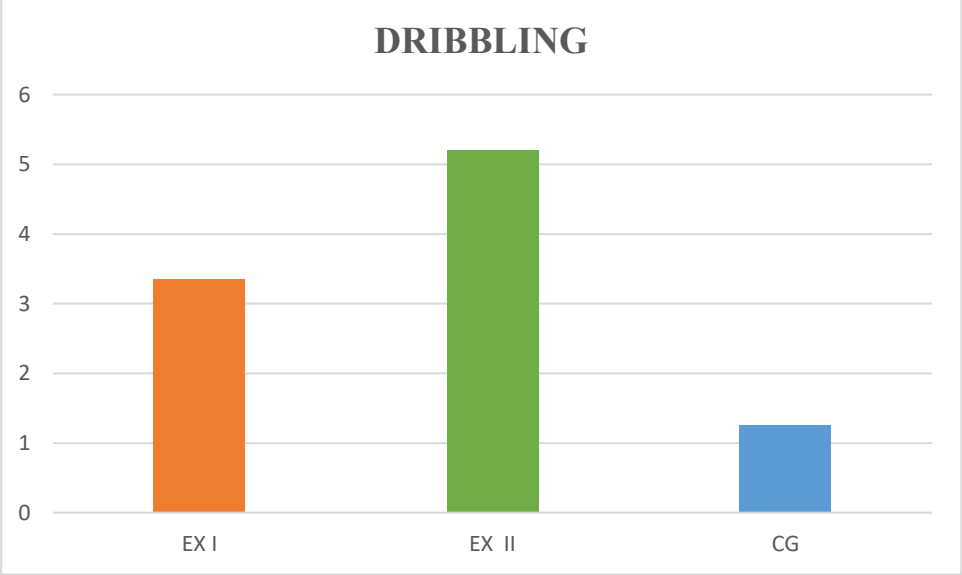


**FIGURE-IV**
**BAR DIAGRAM SHOWING THE 't' VALUES OF EXPERIMENTAL AND CONTROL GROUPS ON OVERALL PLAYING ABILITY AMONG SOCCER PLAYERS**

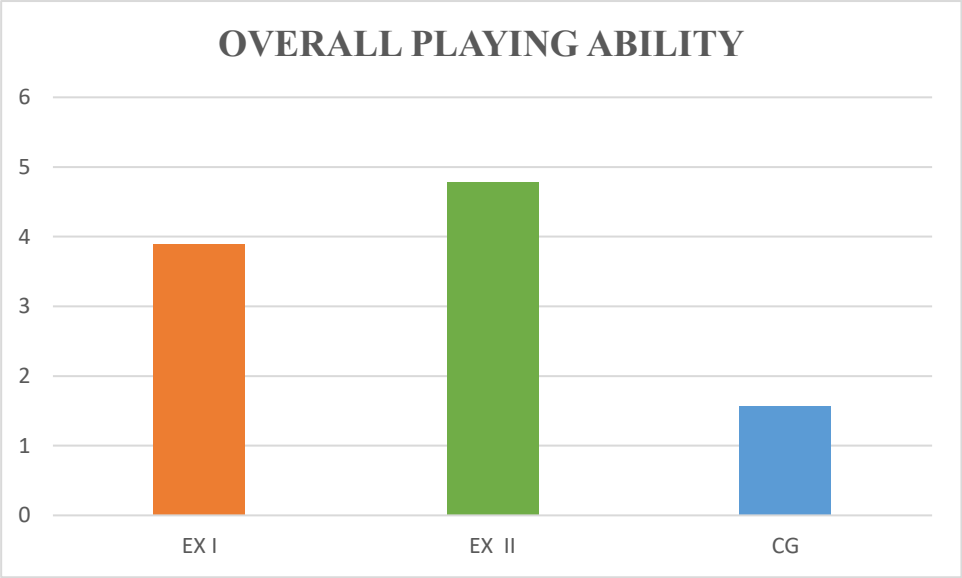



**TABLE - III**
**ANALYSIS OF VARIANCE ON PRE AND POST-TEST MEANS OF SOCCER PLAYERS ON SPEED, CARDIOVASCULAR ENDURANCE, DRIBBLING AND OVERALL PLAYING ABILITY**

| Variables | Source of variance | | Sum of square | Mean square | F – ratio |
|---|---|---|---|---|---|
| **Speed** | Pre test | Between sets | 0.76 | 0.25 | **0.49** |
| | | Within sets | 28.58 | 0.51 | |
| | Post test | Between sets | 3.38 | 1.13 | **3.33*** |
| | | Within sets | 21.92 | 0.39 | |
| **Cardiovascular endurance** | Pre test | Between sets | 410556.67 | 136852.22 | **1.93** |
| | | Within sets | 3960686.67 | 70726.55 | |
| | Post test | Between sets | 1160080.05 | 386693.35 | **5.66*** |
| | | Within sets | 3828107.60 | 68359.06 | |
| **Dribbling** | Pre test | Between sets | 0.09 | 0.03 | **0.05** |
| | | Within sets | 38.75 | 0.69 | |
| | Post test | Between sets | 4.77 | 1.59 | **3.85*** |
| | | Within sets | 31.21 | 0.56 | |
| **Overall playing ability** | Pre test | Between sets | 0.32 | 0.11 | **0.05** |
| | | Within sets | 126.67 | 2.26 | |
| | Post test | Between sets | 64.33 | 21.44 | **6.92*** |
| | | Within sets | 173.60 | 3.10 | |

*Significant at 0.05 level (3.23) df is 2 and 42.

In the initial data analysis, of variance ('F' test) was applied to find out the significance of mean difference in the pre and post-test among the three groups namely technical training with SSG, tactical training with SSG and Control Group on Speed, Cardiovascular Endurance, Dribbling, Overall playing ability of soccer players. The analysis is presented in table 4.4

Table – III reveals the obtained 'F' values on pre and post-test means among the three groups. The obtained 'F'ratio were: Speed (**0.49**) Cardiovascular Endurance (**1.93**), Dribbling (**0.05**) and Overall Playing Ability (**0.05**). The 'F' values observed on pre-test these variables are not significant since it fails to reach the critical ratio of 3.23 for degree of freedom 2 and 42 at 0.05 levels and The obtained 'F'ratio were: Speed (**3.33***), Cardiovascular Endurance (**5.66***), Dribbling (**3.85***) and Overall Playing Ability (**6.92***) The 'F' values observed on post-test these variables are highly significant as the values are higher than the required critical value 3.23 for degree of freedom 2 and 42 at 0.05 levels.

**FIGURE-V**
**PIE DIAGRAM SHOWING THE ANALYSIS OF VARIANCE ON PRE AND POST-TEST MEANS OF SOCCER PLAYERS ON SPEED**

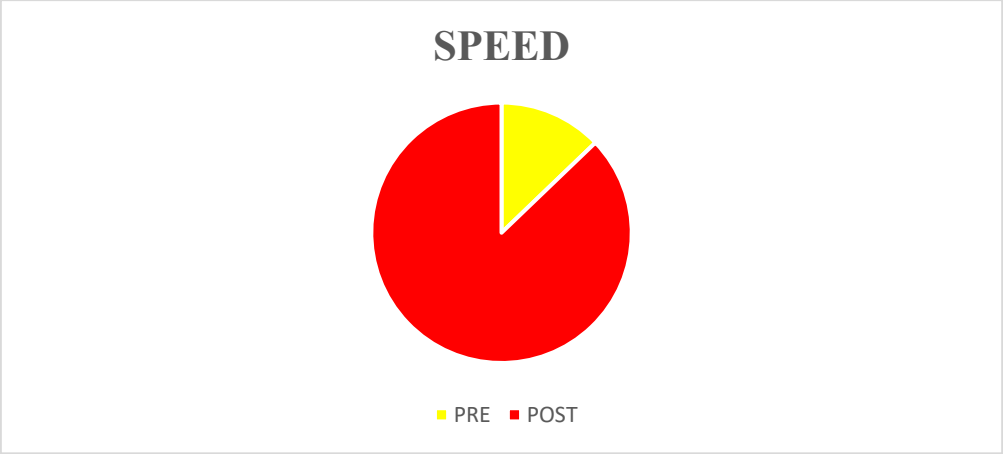



**FIGURE-VI**
**PIE DIAGRAM SHOWING THE ANALYSIS OF VARIANCE ON PRE AND POST-TEST MEANS OF SOCCER PLAYERS ON CARDIOVASCULAR ENDURANCE**

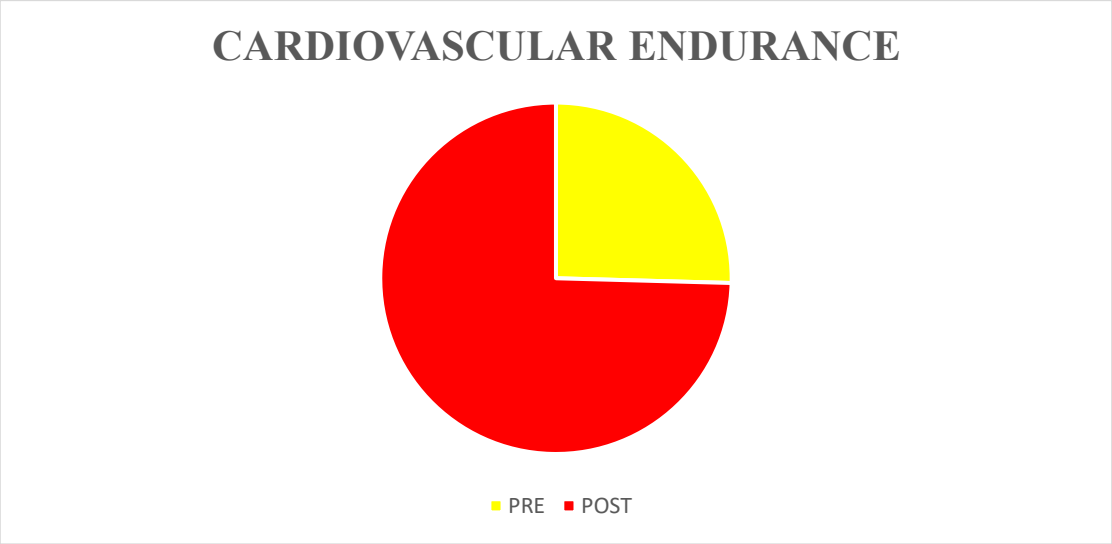


**FIGURE-VII**
**PIE DIAGRAM SHOWING THE ANALYSIS OF VARIANCE ON PRE AND POST-TEST MEANS OF SOCCER PLAYERS ON DRIBBLING**

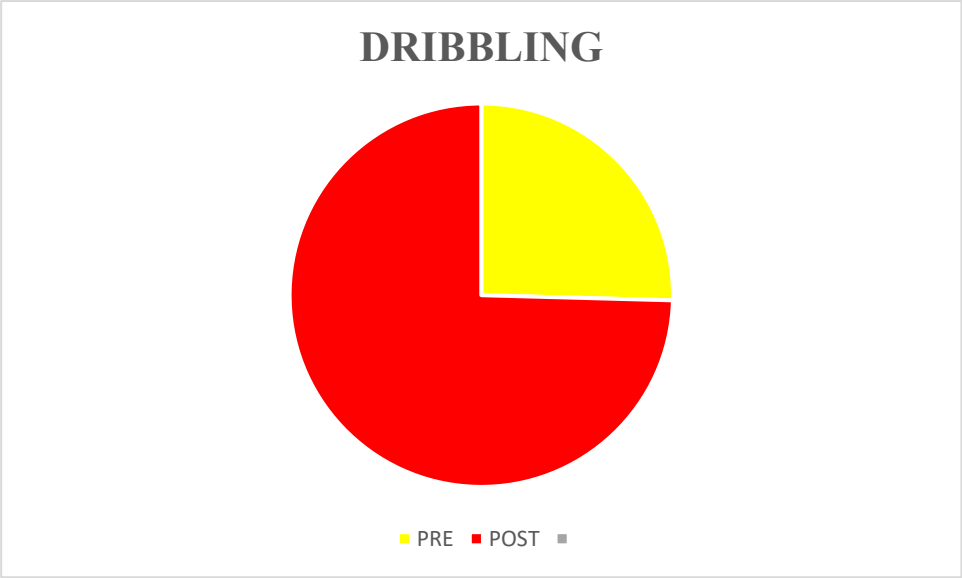
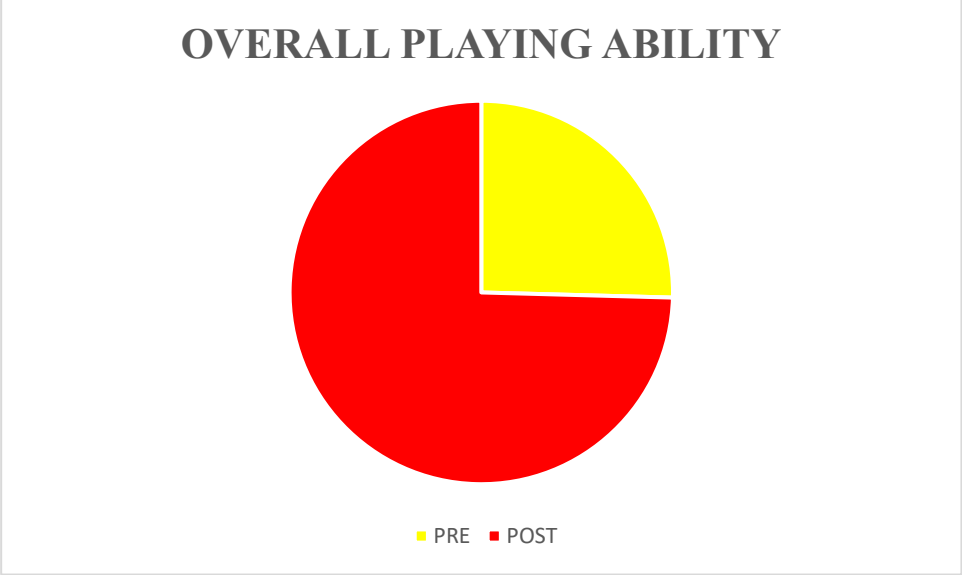



**FIGURE-VIII**
**PIE DIAGRAM SHOWING THE ANALYSIS OF VARIANCE ON PRE AND POST-TEST MEANS OF SOCCER PLAYERS ON OVERALL PLAYING ABILITY**




## FINDINGS

The findings observed on impact on different dimensional training with ssg on soccer players are as follows:

1. In the technical training with SSG group, the mean differences observed between pre– test and post – test for Speed, Cardiovascular Endurance, Dribbling and Overall playing ability of soccer player were statistically significant.

2. In the tactical training with SSG group, the mean differences observed between pre– test and post – test for Speed, Cardiovascular Endurance, Dribbling and Overall playing ability of soccer player were statistically significant.
3. In the control group, the mean differences observed between pre– test and post – test for Speed, Cardiovascular Endurance, Dribbling and Overall playing ability of soccer player were not statistically significant.
4. In the tactical training with SSG group, the mean differences observed between pre– test and post – test for Speed and Cardiovascular Endurance of soccer player were statistically significant then the tactical training with SSG group.
5. In the technical training with SSG group, the mean differences observed between pre– test and post – test for Dribbling and Overall playing ability of soccer player were statistically significant then the technical training with SSG group.

## DISCUSSION ON FINDINGS

The study found that a twelve week of technical training with small sided game (SSG) and tactical training with small sided game (SSG) had a significant positive impact on the physical fitness, performance variables and playing ability of soccer player namely Speed, Cardiovascular endurance, Dribbling and Overall playing ability of soccer players. It is also found that the improvement caused by technical training with small sided game (SSG) and tactical training with small sided game (SSG) significantly improved the experimental groups when compared to the control group. Thus, the results are in line with other study of which has Repercussion of Various Isolated Soccer Training with SSG on Physical Fitness, Performance Variables and Playing Ability of soccer players.

Speed significantly improved following the intervention. Small-sided games, due to their repetitive high-intensity nature, contribute to the enhancement of acceleration and sprinting capabilities **(Köklü et al., 2011; Hill-Haas et al., 2010)**. The frequent sprints, quick changes of pace, and demand for reactive movements in SSGs replicate competitive game conditions, thereby improving speed-related performance.

Cardiovascular endurance showed a notable increase, consistent with findings from **Dellal et al. (2008) and Halouani et al. (2014)**, who concluded that SSGs were effective for improving aerobic capacity due to their sustained intensity and minimal rest periods. The continuous effort replicates match demands, making this modality an effective aerobic training method.

Dribbling abilities improved due to both isolated technical practice and in-game applications within SSGs. **Slaidiņš and Fernāte (2021)** found that dedicated dribbling drills enhance motor control and ball mastery, while **Aguiar et al. (2013)** observed that SSGs improve dribbling under time and space constraints.

Overall playing ability reflecting combined skill execution, tactical awareness, and physical competence showed the most holistic improvement. **Clemente, Afonso, and Sarmento (2021)** affirm that integrated training combining SSGs with tactical and technical elements leads to comprehensive development. Tactical sessions enhance positioning, decision-making, and understanding of play dynamics **(Memmert, 2010; Rico-González et al., 2022)**, thereby elevating overall performance.

## CONCLUSIONS

The study concludes that a twelve week program of technical training with small sided game (SSG) and

tactical training with small sided game (SSG) effectively enhances Speed, Cardiovascular endurance, Dribbling and Overall playing ability of soccer player. Moreover, these improvements were significantly greater in the Experimental group I and Experimental group II compared to the Control group, highlighting the efficacy of this training approach in enhancing physical fitness, skill performance variables and playing ability of soccer player.

The study concludes that a twelve week program of technical training with small sided game (SSG) group were significantly greater in Speed and Cardiovascular endurance of soccer player then the tactical training with small sided game (SSG) group.

The study concludes that a twelve week program of tactical training with small sided game (SSG) group were significantly greater in Dribbling and Overall playing ability of soccer player then the tactical training with small sided game (SSG) group.

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