Study The Impact Of Circuit Training Program On The Physical Performance Of Kabaddi Players

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ABSTRACT

The researcher selected kabaddi players from Vidhyadham Prashala Deodaithan, Tal- Shrigonda Dist- Ahilyanagar for this study. The impact of circuit training on the physical performance of kabaddi players was examined. Training was conducted for six weeks for the study. Participants were categorized into two groups: the experimental group and the control group. The control group received no form of training. circuit training was employed during the training process. This resulted in improvements in the speed, power, agility, and c.v. endurance of the kabaddi players. Kabaddi players require enhanced physical ability. speed, power, agility, and c.v. endurance are crucial in this context. Physical ability must be cultivated to become a skilled player. This research involved a study of circuit training among kabaddi players. This research demonstrated that without training, players do not progress, indicating a necessity for additional instruction. A kabaddi player derives greater advantages from these traits, and training is essential to enhance these attributes in a proficient player.

Keywords : kabaddi players, circuit training, strength, power, agility, speed

Introduction

Kabaddi is a traditional Indian contact sport distinguished by its unusual combination of speed, strength, and strategy. It has achieved international popularity and is played in a number of countries, including Pakistan, Iran, and South Korea. The sport requires significant physical contact, making it both a cultural emblem and a research topic due to its social and physical ramifications. Kabaddi acts as a vehicle for cultural affirmation and resistance among oppressed groups. South Asian male migrants

in Greece use Kabaddi as a performative act of resistance against exclusionary practices, allowing them to assert their identity and manhood in a strange nation (Kukreja, 2023). Similarly, in India and Pakistan, Kabaddi gives women from rural regions with a sense of independence and security, defying the masculine hegemonic culture and allowing them possibilities for involvement in physical activities (Hussain & Cunningham, 2021). The game of Kabaddi is one that helps players improve their physical attributes, including their muscular strength, stamina, and cardiovascular endurance. One of the sport's distinctive characteristics, known as "Cant holding," helps athletes improve their flexibility, agility, and reaction times, which in turn contributes to their overall physical growth. The game also needs coordination and psychological concentration, as players need to estimate energy and space efficiently (Yallappa, 2020). Because Kabaddi is a confrontational sport, players are more likely to sustain injuries. Knee, ankle, and shoulder injuries are among the most common types of injuries, while severe orofacial injuries disproportionately affect a considerable number of people (Johnson et al., 2023). Injury risk factors include poor technique, insufficient warm-up, and a lack of protective equipment. Preventive methods such as adequate warm-up, use of mouthguards, and strength training are recommended to reduce injuries (Hardiansyah et al., 2024). Kabaddi players have been proven to see significant improvements in a variety of performance indicators when they participate in circuit training. According to studies, improvements can be made in knee hold and kicking abilities, both of which are exceptionally important for the sport (Karuppaiah & Kumar, 2022). Furthermore, after several weeks of constant exercise, circuit training has been shown to increase total physical fitness levels, including muscular strength and endurance (Vadivel & Maniazhagu, 2022). Agility, particularly the ability to change direction fast, is essential for Kabaddi players. Circuit training, particularly when paired with elastic bands, has been proven to greatly increase direction-changing speed. This enhancement is related to the resistance supplied by the bands, which raises the intensity of the exercises and results in a significant speed increase during direction changes (Utama et al., 2022).. While circuit training has multiple advantages, it is critical to tailor training programs to the unique needs of kabaddi players. Future research should look into the optimal intensity and duration of circuit training sessions to optimize benefits while lowering the risk of injury. Furthermore, incorporating circuit training with other training methods, such as interval training, may provide a more holistic approach to improving performance in kabaddi (Guggari & Singh, 2024).

Methodology

This research focuses on the impact of circuit training on the physical performance of Kabaddi players aged 14-16 from Vidhyadham Prashala Deodaithan, Tal- Shrigonda

Dist- Ahilyanagar. A sample of 30 players was selected using the Simple Random Sampling method. The experimental study will measure the physical capacity of Kabaddi players through Youth Fitness tests such as 50-meter dash, pullups, shuttle runs, and 600-yard runs/walks.

Data Analysis

All of the events—50-meter dash, pull-ups, shuttle run, 600-yard run/walk—were subjected to statistical analysis. The hypothesis regarding significant differences in physical ability between the experimental and control groups of kabaddi players was investigated using an independent samples t-test. A t-test was used to conduct both the pre- and post-tests. A t-test was performed at the 0.05 level of confidence to evaluate the degree of freedom for the given results.

Table No. 1 : *Analysis of Speed of Kabaddi Players*

Experimental Group	Descriptive Statistics			Independent Sample t Test		
	N	Mean	SD	t	df	Sig. (2-tailed)
Pre Test	15	6.66	0.3	2.29596	28	0.02937
Post Test	15	6.4	0.32			
Control Group	N	Mean	SD	t	df	Sig. (2-tailed)
Pre Test	15	7.35	0.66	0.07347	28	0.94195
Post Test	15	7.37	0.73			

The group statistics table reveals a significant difference in the mean speed value of the experimental group for the pretest (M= 6.66, S.D = 0.30) as compared to the posttest mean value (M= 6.40, S.D = 0.32). The table 1 presents a two-tailed significance value of 0.02937, which is below the threshold of 0.05, along with a t-value of 2.295963. The group statistics table reveals no significant difference in the control group's mean speed value for kabaddi players between the pretest (M = 7.35, S.D. = 0.66) and the posttest (M = 7.37, S.D. = 0.73). The table presents a two-tailed significance value of 0.94195, which exceeds the threshold of 0.05, along with a t-value of 0.0734713.

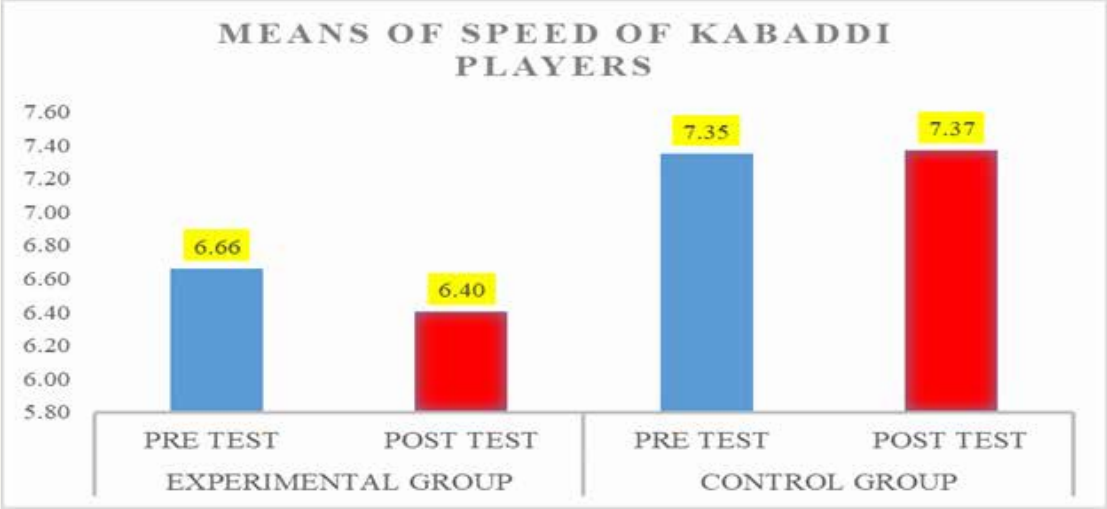
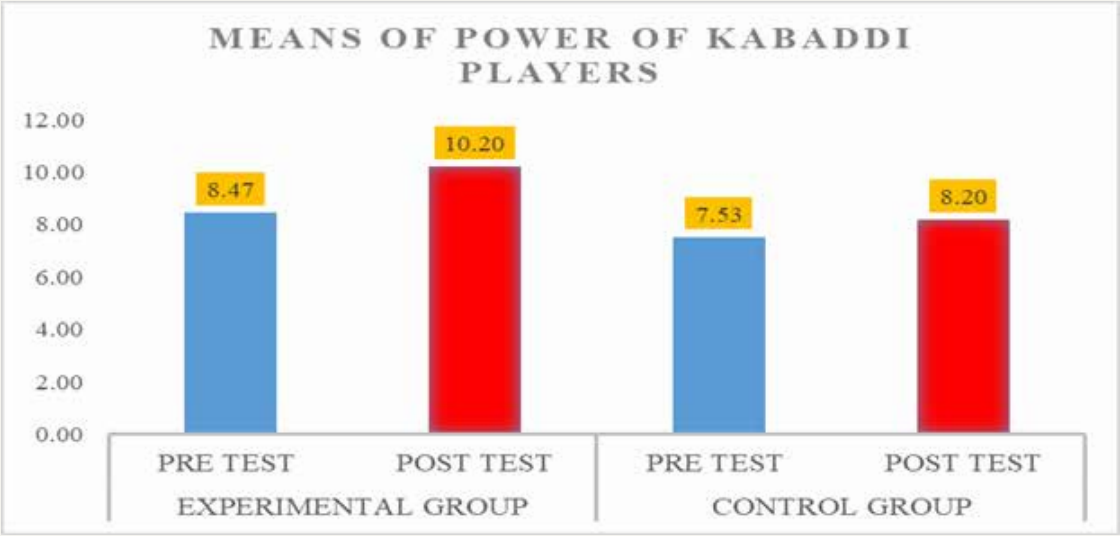


Table No. 2 : *Analysis of Power of Kabaddi Players*

Experimental Group	Descriptive Statistics			Independent Sample t Test		
	N	Mean	SD	t	df	Sig. (2-tailed)
Pre Test	15	8.47	1.46	3.18661	28	0.00352
Post Test	15	10.2	1.52			
Control Group	N	Mean	SD	t	df	Sig. (2-tailed)
Pre Test	15	7.53	1.06	1.65359	28	0.10938
Post Test	15	8.2	1.15			

The group statistics table indicates a significant difference in the mean power value of the experimental group between the pretest (M= 8.47, S.D = 1.46) and the posttest (M= 10.20, S.D = 1.52). Table 2 indicates a two-tailed significance value of 0.00352, which is below the 0.05 threshold, accompanied by a t-value of 3.18661. The group statistics table indicates no significant difference in the control group's mean power value for kabaddi players between the pretest (M = 7.53, S.D. = 1.06) and the posttest (M = 8.20, S.D. = 1.15). The table indicates a two-tailed significance value of 0.10938, above the 0.05 threshold, and a t-value of 1.6535946.



Analysis of Agility of Kabaddi Players-

The group statistics table reveals no significant difference in the mean agility value of the experimental group between the pretest (M= 16.92, S.D = 0.43) and the posttest (M= 16.78, S.D = 0.42). Table 3 presents a two-tailed significance value of 0.36, exceeding the 0.05 threshold, along with a t-value of 0.94. The group statistics table shows no significant difference in the control group's mean agility value for kabaddi players between the pretest (M = 18.43, S.D. = 1.11) and the posttest (M = 18.70, S.D. = 0.98). The table presents a two-tailed significance value of 0.49, exceeding the 0.05 threshold, alongside a t-value of 0.69.

Table No.3 :

Experimental Group	Descriptive Statistics			Independent Sample t Test		
	N	Mean	SD	t	df	Sig. (2-tailed)
Pre Test	15	16.92	0.43	0.94	28	0.36
Post Test	15	16.78	0.42			
Control Group	N	Mean	SD	t	df	Sig. (2-tailed)
Pre Test	15	18.43	1.11	0.69	28	0.49
Post Test	15	18.7	0.98			

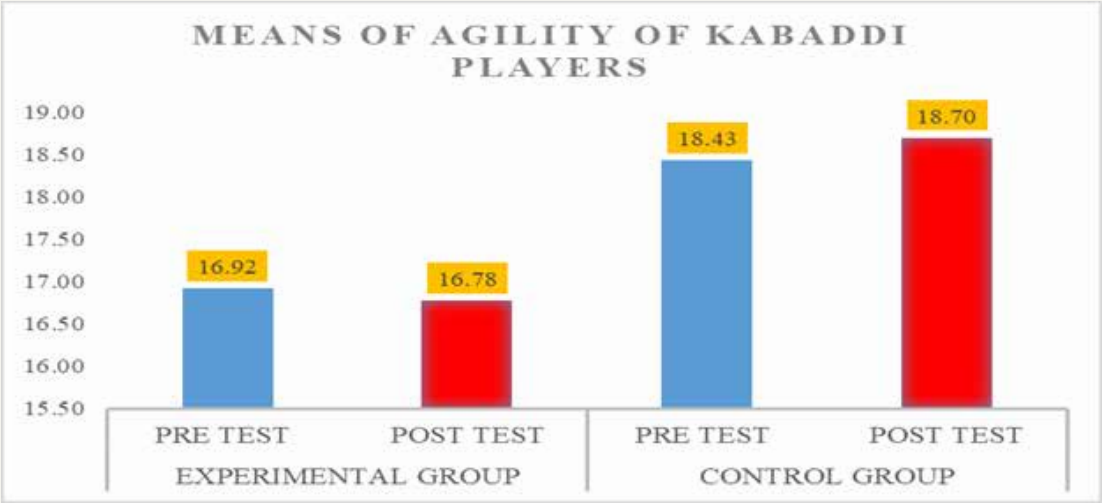
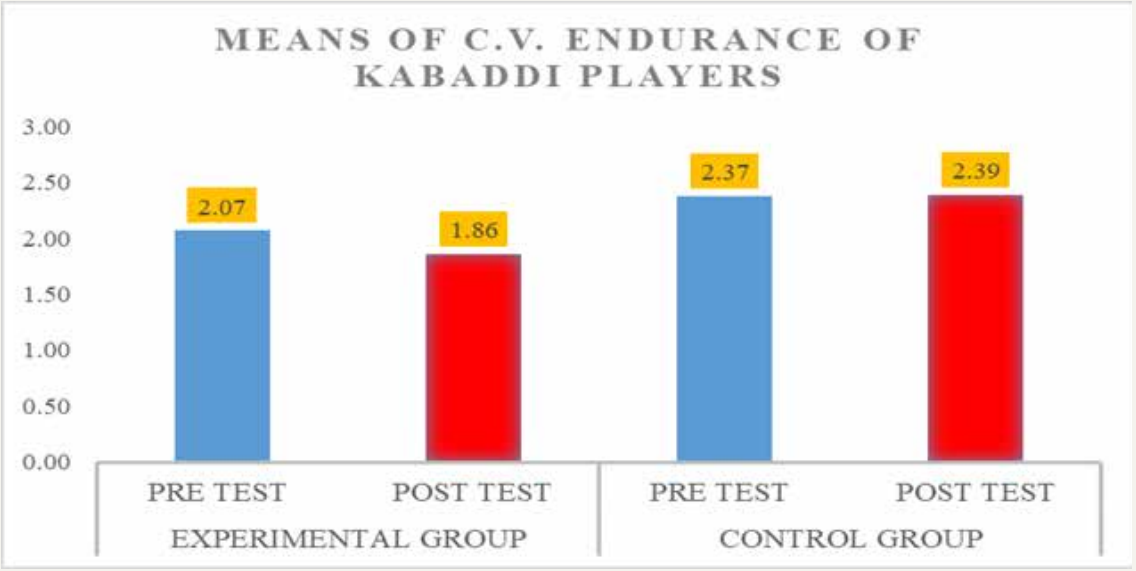


Table No. 4 : *Analysis of C.V. Endurance of Kabaddi Players-*

Experimental Group	**Descriptive Statistics**			**Independent Sample t Test**		
	N	Mean	SD	t	df	Sig. (2-tailed)
Pre Test	15	2.07	0.16	2.65192	28	0.01303
Post Test	15	1.86	0.26			
Control Group	N	Mean	SD	t	df	Sig. (2-tailed)
Pre Test	15	2.37	0.25	0.15831	28	0.87535
Post Test	15	2.39	0.25			

The group statistics table reveals no significant difference in the mean C.V. Endurance value of the experimental group between the pretest (M= 2.07, S.D = 0.16) and the posttest (M= 1.86, S.D = 0.26). Table 4 presents a two-tailed significance value of 0.01303, which smaller than the 0.05 threshold, along with a t-value of 2.65192. The group statistics table shows no significant difference in the control group's mean C.V. Endurance value for kabaddi players between the pretest (M = 2.37, S.D. = 0.25) and the posttest (M = 2.39, S.D. = 0.25). The table presents a two-tailed significance value of 0.87535, exceeding the 0.05 threshold, alongside a t-value of 0.1583132.



Results

According to the findings of this study, kabaddi players underwent to circuit training. This research discovered that players do not make any progress in their game if they do not receive guidance, which indicates that the player requires additional training. Players in Kabaddi require a greater range of physical ability. Among these are qualities such as strength, power, agility, and speed, which is an essential component. In order to become a good player, one must work on developing their physical ability. More of these components are present in a kabaddi player, and training is required to cultivate these components in a player who is competent at the game.

Conclusion

Following the training of the kabaddi players, it was observed that those who underwent training exhibited a positive change, whereas no changes were noted in the players who did not participate in the training. Following six weeks of training, noticeable progress has been observed in the players. This training method significantly influenced the speed, power, and c.v. endurance As well as positively influenced the agility of the kabaddi players. No impact was noted on the participants in the control group.

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