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EXAMINE IMPACT OF TRAINING ON SELECTED PHYSIOLOGICAL FITNESS COMPONENTS OF INTERCOLLEGIATE KABADDI PLAYERS

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ABSTRACT

Kabaddi is essentially an Indian game that mixes the individualism of wrestling and rugby by requiring equal skill and force. Kabaddi is properly known as the "GAME OF THE MASSES" because of its appeal, simple, easy-to-understand rules, and widespread demand. The main aim of this paper is to examine the impact of training on selected physiological components of Intercollegiate Kabaddi players. To accomplish these goals, 45 kabaddi players were chosen at random from the Mumbai region. The individuals' ages ranged between 18 and 23 years. They were divided into three categories. Each group consists of 15 players who were deemed to be suitable for the study's purposes. The syudy concluded that the physiological components such as forced vital capacity, breathe holding time, systolic blood pressure, diastolic blood pressure and resting pulse rate. The results shown there were no significant difference in systolic and diastolic blood pressure as a result of concurrent and fartlek training.

Keywords: Kabaddi players, physiological components forced vital capacity, breathe holding time, systolic blood pressure, diastolic blood pressure and resting pulse rate

INTRODUCTION

The physiology structure of body should be fit; it should function well sufficient to support specific activity that individual is performing. Moreover, different activities make1different demands upon organism with esteem to circulatory, respiratory, metabolic & neurological & thermo regulatory functions. It is clear that there is an increasing awareness of the importance of physiological variables in enhancing the health and performance. Therefore, physiological variables such as pulse rate, breath holding time, vital capacity, blood pressure & many more receive special consideration and it is an important requirement for excellent performance in sports activity.

Kabaddi is a total collective sporting modality, characterized by the great amount and selection in its activities, manipulations and communication with other athletes. Looking for an improved powerful and objectivity, Kabaddi agreed all the way through several evolutionary processes that accordingly started to demand from athlete's larger physiological adaptations & other uniqueness. The player's performance in the Kabaddi of high level depends directly on various physical variables. The estimate of the management implicates the classification and denomination of the individual level of the components of the sporting performance or of condition situation. It is necessary that all the variables related to the kabaddi players appearance to be evaluated. Even with that significance, it is stationary noticed a lack of studies that use evaluations and examination with direct trial, seeking to decide the maximum aerobic power the maximum anaerobic power, the anaerobic sill and the lactate entrance, in players of the Kabaddi.

For our country to be successful in sports, to distinguish sportsman much earlier is indisputably mandatory.

To be successful in Kabaddi, the technical, tactical, capacity, and situation of a team, like in all sports, are essential. In this sense, major discourse appears to perpetuate in terminological themes. Physiological variables such as age, height, and weight were considered before participating in the Kabaddi sport branch. Because Kabaddi selection is done at a young age, physiological characteristics and physical shape should be carefully read. Variables that affect physical profile were observed. Respiration parameters, blood pressures, aerobic and anaerobic capability are among the experimental variables. Aerobic exercise is just working with oxygen. It is accomplished by exerting vast muscle groups in the presence of ample oxygen, at a maximal pulse rate of (60% - 80%) over an extended length of time. The suggested time of 12 minutes is critical here since it is during this time that the enzymes to burn body fat are created. Furthermore, aerobic activity promotes an increase in the amount of oxygen absorbed by the body, allowing the heart to consume more oxygen and improving the health of the heart and lungs. Anaerobic indicates that there is a shortage of oxygen in the muscles. In this circumstance, the sugar-consuming enzymes are also activated. This activation consumes more energy than the body can create by metabolizing oxygen. To obtain better and better performance in kabaddi, players must be physiologically fit and sound.

OBJECTIVES OF THESTUDY

To examine effect of cross training & fartlek training on selected physiological variables of Kabaddi players of Mumbai region

HYPOTHESES

The present study tests the following hypotheses.

1. It will hypothesised that effect of cross training & fartlek training on selected physiological components would be significantly increase when compared with the control group.
2. The fartlek training group would be superior to cross training group on selected physiological components.

REVIEW OF RELATED LITERATURE

Iaia and Bangsbo (2010) investigated the physiological parameters and performance speed endurance training of activity sessions at near and close maximum pressures on trained participants. There will be a drop in training volume and speed endurance among endurance training athletes in various competitions. Extraordinary workout activities and persistence angles may improve speed endurance. Extreme oxygen intake, glycol tic and oxidative chemical activity, and membrane circulation proteins associated with pH direction are the alterations that do not rely on upgrades. A speed endurance exercise might be advantageous to their training regimen.

Arazi (2013) investigated effects of high, moderate, & low intensity plyometric exercise on post-exercise systolic & diastolic blood pressure & heart rate. Ten healthy normotensive men(age 21.09 years; height 175.86 cm; & body mass 69.113.6 kg) volunteered to participate in

this study & were evaluated in depth jump exercise from 20-cm box (low intensity [LI]), 40-cm box (moderate intensity [MI]), & 60-cm box (high intensity [HI]) for five sets of 20 repetitions over 3 non-consecutive days. Systolic blood pressure (SBP), diastolic blood pressure (DBP), and heart rate (HR) were assessed every 10 minutes after each activity session for a total of 90 minutes. When the protocols (LI, MI, and HI) were evaluated, no significant variations in post exercise SBP, DBP, or HR were found. The LI and HI protocols reduced SBP at 40(th)-70(th) minutes after exercise (9 percent), whereas the LI & MI procedures reduced DBP at 10(th)-50(th) minutes after exercise (10%). Furthermore, the change in DBP for HI was not substantial, & increases in HR were similar across all intensities. It may be inferred that plyometric exercise (PE) can reduce SBP and DBP post-exercise, & so PE has substantial benefits on lowering BP and HR or post-exercise hypotension.

Kota and Kumar (2014) investigated the impact of Plyometric training and Plyometric plus Pilates exercises on selected motor ability, physiological, and skill-related performance characteristics in volleyball players. To meet the goals of this study, 60 collegiate male volleyball players were chosen at random from the Warangal district of Telangana, ranging in age from 18 to 23 years. They were placed into three equal groups of twenty participants each. Group A received Plyometric training; Group B received Plyometric plus Pilates exercise three days per week for 12 weeks on alternate days; and Group C served as a control, receiving no extra training other than the normal curricular activities. The acquired data were statistically evaluated using analysis of variance (ANOVA) to discover differences, analysis of covariance (ANCOVA) to assess differences, and Scheheffe's test as a post hoc test to determine paired mean differences. To test the hypotheses, the 0.05 level of confidence was used in all situations.

Rai (2017) compared the selected physiological and hematological variables such as the maximum intake of oxygen, vital capacity, resting pulse rate, arterial pressure mean, haemoglobin range, bilirubin, glucose and urea of blood among the soccer players. A sum of 30 players at the level of district, state and university were selected for the study. ANOVA with 'F' ratio at a significance level of 0.05 was applied to determine the significant difference of the selected variables. The result showed level of significant difference of VO_2 max of the district players compared to the state and the university players however the latter should more or less similar level of VO_2.

G Kalpana (2021) study was to find out the effect of specific training on selected physical fitness components & skill performance of intercollegiate Kabaddi player. To achieve this purpose of study, fifteen Kabaddi players who participated in intercollegiate tournaments were randomly selected as subjects from Thanjavur District. The age of subjects were ranged between 20 to 25 years. The selected physical fitness components namely endurance and flexibility were selected and ankle hold and blocking were selected as skill variables. The data were collected among the Kabaddi players were statistically analysed by using student t-test. In all cases 0.05 level of confidence was fixed to test significance. The "t" ratio was employed as a statistical tool to find out the appropriate result of study & provided significance at 0.05 level of confidence. There was a significant difference between pre and post test of endurance, flexibility & skill performance among Kabaddi players.

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Pooyan Sabet (2021) study effect of a 12-week different resistance training protocols on muscular strength of secondary school male students of Jahrom county, Iran. The subjects of this study consisted of 30 male secondary school students with the average age of 13/3 years which were divided into 3 groups of 10 people (2 experimental groups & 1 control group). The first Experimental group (n=10) performed a high repetition-moderate load resistance training program; the second experimental group (n=10) performed a low repetition-heavy load resistance training program; & control group (n=10) did not take part in any resistance training. The Experimental groups had sessions of resistance training three times in a week for12 weeks. The first group, performing the high repetition-moderate load program, had 3 sets of 13-15 repetitions; and the second group, performing a low repetition-heavy load program, had 3 sets of 6-8 repetitions. The overall result of this study reveals that if performed correctly, strength training is not dangerous and harmful, but on the contrary, it can improve health and muscular strength.

Pradeep Shankar Patil (2022) study was "Development of knowledge test for elite female Kabaddi players of Pune district in Maharashtra". The study is confined to the Kabaddi players of 18 to 25 years age group. The study is restricted to Pune district in Maharashtra state only. The study has been delimited to the elite female Kabaddi players. The Kabaddi players may be able to assess and understand their own knowledge-status on the game. This study may help to enhance their knowledge-status on Kabaddi in such a way so that the coaches of this game may get a readymade standard test for testing the knowledge-status of the players to whom they are going to coach. Accordingly the coaching strategy may be modified to exhibit top performance.

ANALYSIS OF DATA

1. ANALYSIS OF COVARIANCE FOR FORCED VITAL CAPACITY

TABLE 1 ANALYSIS OF COVARIANCE FOR FORCED VITAL CAPACITY ON PRE TEST AND POST TEST DATA OF EXPERIMENTAL AND CONTROL GROUPS (in Litres)

Tests	Concurrent Training Group	Fartlek Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	'F' Ratio
Pre Test								
Mean	2.03	2.03	1.97	B	.04	2	.02	0.87
SD	.47	.54	.45	W	10.09	87	.24	
Post Test								
Mean	2.26	2.28	1.97	B	.83	2	.42	2.85
SD	.34	.36	.44	W	6.12	87	.15	
Adjusted Post Test								
Mean	2.24	2.26	2.0	B	.59	2	.29	9.61*
				W	1.27	86	.03	

* Significant at 0.05 level.

The Required table for df (2&87) at 0.05 level of confidence = 3.22
(2&86) at 0.05 level of confidence = 3.21

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It is derived from table 1 that the pre test means on forced vital capacity of the experimental and control groups are 2.03, 2.03 and 1.97 respectively. The obtained 'F' ratio value 0.87 for the pre test mean is lesser than the required table value 3.22 for 2 & 87 degrees of freedom at 0.05 level of confidence. There is no significant difference between the experimental and the control groups on forced vital capacity for the pre test data.

The post test means on forced vital capacity of the experimental and the control groups are 2.26, 2.28 and 1.97 respectively. The obtained 'F' ratio value 2.85 for the post test data is lesser than the required table value 3.22 for 2 & 87 degrees of freedom at 0.05 levels of confidence. It shows that there is no significant difference between the experimental and the control groups on forced vital capacity following the experimental training.

The adjusted post test means on forced vital capacity of the experimental and the control groups are 2.24, 2.26 and 2.0 respectively. The obtained 'F' ratio value of 9.61 for the adjusted post test data is greater than the required table value 3.21 for 2 & 86 degrees of freedom at 0.05 level of confidence. It reveals that there is significant change on forced vital capacity as a result of the experimental training. Since the result has revealed that there is a significance difference, among the three groups. Since the difference exists in the adjusted post test mean, further multiple comparison tests was applied.

TABLE 2 SCHEFFES POST-HOC TEST FOR MEAN DIFFERENCE BETWEEN GROUPS ON FORCED VITAL CAPACITY (in Litres)

Mean Value			Mean Difference	F' value	C.I
Concurrent Training	Fartlek Training	Control Group			
2.24	2.26		0.02	0.2	6.42
2.24		2.00	0.24	14.30*	6.42
	2.26	2.00	0.26	16.78*	6.42

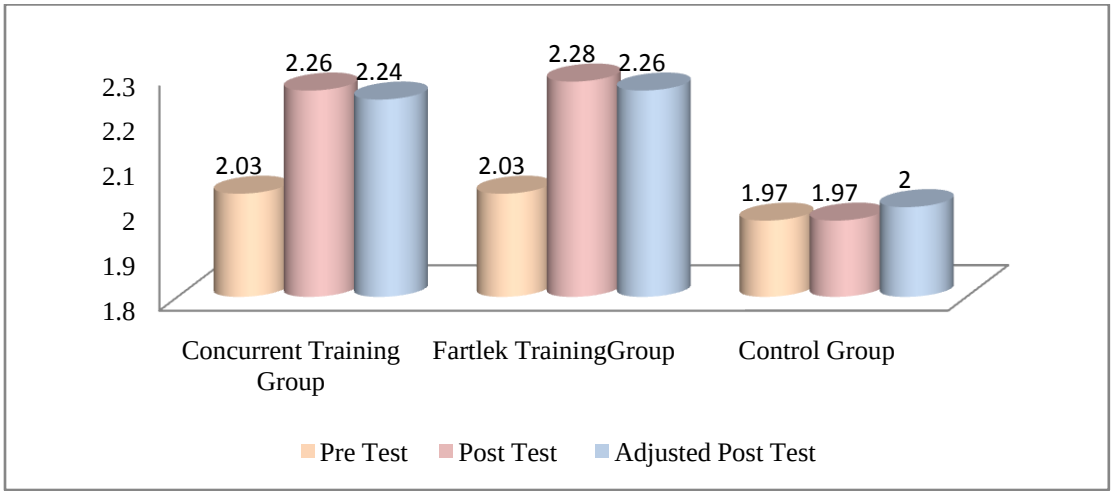

FIGURE 1 GRAPHICAL ILLUSTRATION OF PRE-TEST, POST-TEST AND ADJUSTED POST-TEST MEANS OF EXPERIMENTAL AND CONTROL GROUPS ON FORCED VITAL CAPACITY (in Liters)

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Table 2 shows the paired mean difference among the three groups' namely Concurrent Training and fartlek training and control group. The mean difference between Concurrent Training and fartlek training is 0.02, were the f value of mean gains between the Concurrent Training and fartlek training is 0.2, which is lower than the C.I value. Therefore is no significant difference between Concurrent Training and fartlek training. The mean difference between the Concurrent Training and control group is 0.24, were the f value of mean gain between the Concurrent Training and control group is 14.30, which is greater than the C.I value. Therefore is significant difference between Concurrent Training and control group. The mean difference between the fartlek training and control group is 0.26, were the f value of mean gain between the fartlek training and control group is 16.78, which is greater than the C.I value. So there is significant difference between fartlek training and control group.

2. ANALYSIS OF COVARIANCE FOR 40MM HG BREATH HOLDING TIME

TABLE 3 ANALYSIS OF COVARIANCE FOR 40MM HG BREATH HOLDING TIME ON PRE TEST AND POST TEST DATA OF EXPERIMENTAL AND CONTROL GROUPS (in Seconds)

Tests	Concurrent Training Group	Fartlek Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	'F' Ratio
Pre Test								
Mean	18.73	19.48	20.48	B	23.03	2	11.52	
SD	6.26	5.21	11.07	W	2638.43	87	62.83	.18
Post Test								
Mean	24.14	24.81	19.14	B	288.24	2	144.13	
SD	5.96	3.79	10.23	W	2157.33	87	51.38	2.82
Adjusted Post Test								
				B	416.66	2	208.34	
Mean	24.83	24.88	18.38	W	330.66	86	8.08	25.84*

* Significant at 0.05 level.
The Required table for df (2&87) at 0.05 level of confidence = 3.22
(2&86) at 0.05 level of confidence = 3.21

It is derived from table 3 that the pre test means on breath holding time of the experimental and control groups are 18.73, 19.48 and 20.48 respectively. The obtained 'F' ratio value 0.18 for the pre test mean is lesser than the required table value 3.22 for 2 & 87 degrees of freedom at 0.05 level of confidence. There is no significant difference between the experimental and the control groups on breath holding time for the pre test data.

The post test means on breath holding time of the experimental and the control groups are 24.14, 24.81 and 19.14 respectively. The obtained 'F' ratio value 2.82 for the post test data is lesser than the required table value 3.22 for 2 & 87 degrees of freedom at 0.05 levels ofconfidence. It shows that there is no significant difference between the experimental and the control groups on breath holding time following the experimental training.

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The adjusted post test means on breath holding time of the experimental and the control groups are 24.83, 24.88 and 18.38 respectively. The obtained 'F' ratio value of 25.84 for the adjusted post test data is greater than the required table value 3.21 for 2 & 86 degrees of freedom at 0.05 level of confidence. It reveals that there is significant change on breath holding time as a result of the experimental training. Since the result has revealed that there is a significance difference, among the three groups. Since the difference exists in the adjusted post test mean, further multiple comparison tests was applied.

TABLE 4 SCHEFFES POST-HOC TEST FOR MEAN DIFFERENCE BETWEEN GROUPS ON BREATH HOLDING TIME (in Seconds)

Mean Value			Mean Difference	F' value	C.I
Concurrent Training	Fartlek Training	Control Group			
24.83	24.88		0.05	0.01	6.42
24.83		18.38	6.45	39.69*	6.42
	24.88	18.38	6.5	40.31*	6.42

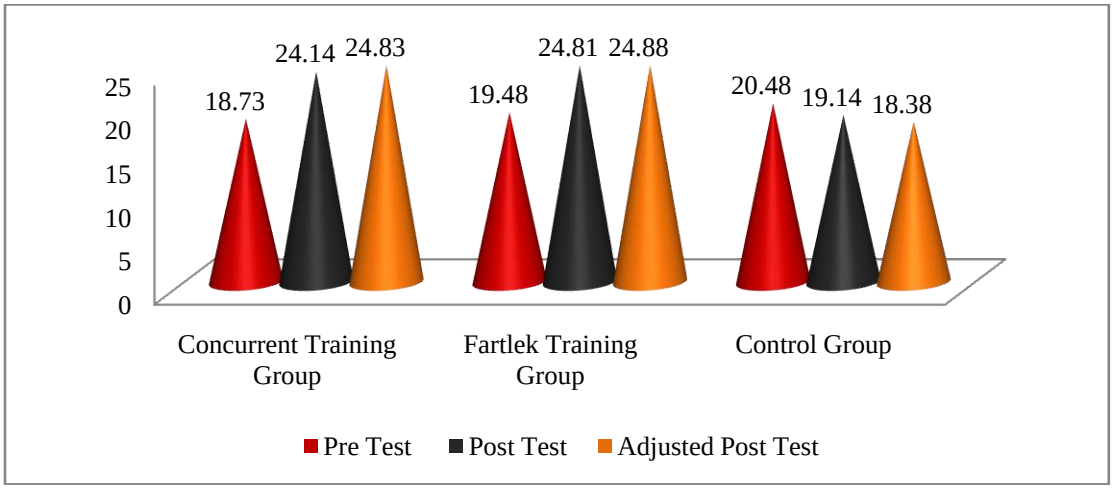

FIGURE 2 GRAPHICAL ILLUSTRATION OF PRE-TEST, POST-TEST AND ADJUSTED POST-TEST MEANS OF EXPERIMENTAL AND CONTROL GROUPS ON BREATH HOLDING TIME (in Seconds)

Table 4 shows the paired mean difference among the three groups' namely Concurrent Training and fartlek training and control group. The mean difference between Concurrent Training and fartlek training is 0.05, were the f value of mean gains between the Concurrent Training and fartlek training is 0.01, which is lower than the C.I value. Therefore is no significant difference between Concurrent Training and fartlek training. The mean difference between the Concurrent Training and control group is 6.45, were the f value of mean gain between the Concurrent Training and control group is 39.69, which is greater than the C.I value. Therefore is significant difference between Concurrent Training group and control group. The mean difference between the fartlek training and control group is 6.5, were the f value of mean gain between the fartlek training and control group is 40.31, which is greater than the C.I value. So there is significant difference between fartlek training and control group.

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3. ANALYSIS OF COVARIANCE FOR SYSTOLIC BLOOD PRESSURE

TABLE 5 ANALYSIS OF COVARIANCE FOR SYSTOLIC BLOOD PRESSURE ON PRE TEST AND POST TEST DATA OF EXPERIMENTAL AND CONTROL GROUPS (in Millimetre)

Tests	Concurrent Training Group	FartlekTrainingGroup	Control Group	Source of Variance	Sum of Squares	Df	Mean Squares	'F' Ratio
Pre Test								
Mean	126.14	127.01	123.28	B	114.54	2	57.28	2.91
SD	4.70	4.94	3.60	W	828.68	87	19.74	
Post Test								
Mean	123.74	123.68	123.21	B	2.54	2	1.28	.06
SD	4.84	4.82	3.58	W	828.68	87	19.74	
Adjusted Post Test								
Mean	123.31	122.61	124.71	B	29.37	2	14.69	1.35
				W	447.89	86	10.93	

* Significant at 0.05 level.

The Required table for df (2&87) at 0.05 level of confidence = 3.22
(2&86) at 0.05 level of confidence = 3.21

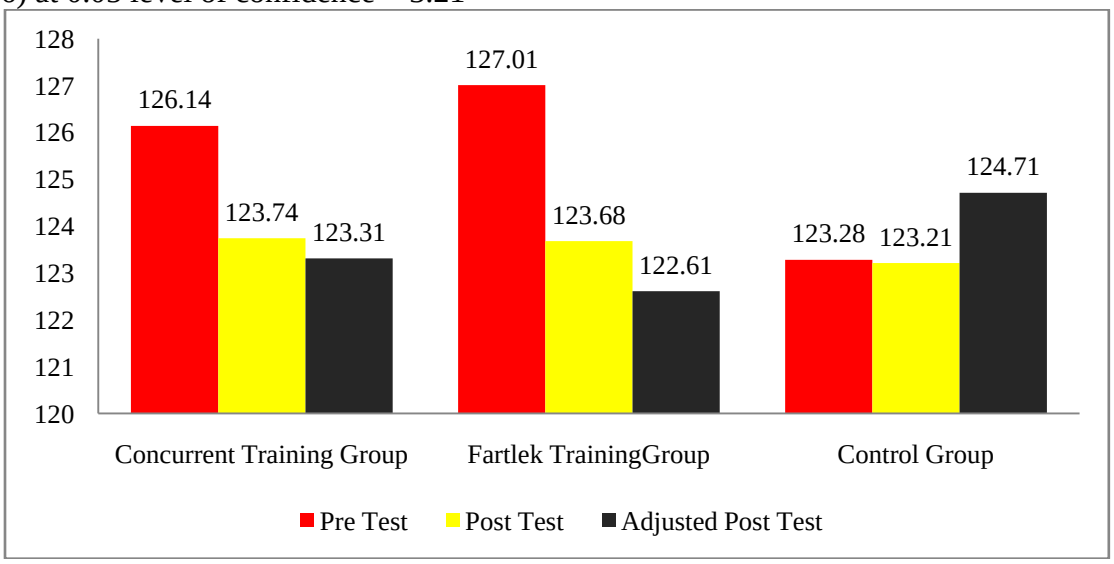

FIGURE 3 GRAPHICAL ILLUSTRATION OF PRE-TEST, POST-TEST AND ADJUSTED POST-TEST MEANS OF EXPERIMENTAL AND CONTROL GROUPS ON SYSTOLIC BLOOD PRESSURE (in Millimetre)

It is derived from table5 that the pre test means on systolic blood pressure of the experimental and control groups are 126.14, 127.01 and 123.28 respectively. The obtained 'F' ratio value 2.91 for the pre test mean is lesser than the required table value 3.22 for 2 & 87 degrees of freedom at 0.05 level of confidence. There is no significant difference between the

experimental and the control groups on systolic blood pressure for the pre test data.

The post test means on systolic blood pressure of the experimental and the control groups are 123.74, 123.68 and 123.21 respectively. The obtained 'F' ratio value 0.06 for the post test data is lesser than the required table value 3.22 for 2 & 87 degrees of freedom at 0.05 levels of confidence. It shows that there is no significant difference between the experimental and the control groups on systolic blood pressure following the experimental training.

The adjusted post test means on systolic blood pressure of the experimental and the control groups are 123.31, 122.61 and 124.71 respectively. The obtained 'F' ratio value of 1.35 for the adjusted post test data is lesser than the required table value 3.21 for 2 & 86 degrees of freedom at 0.05 level of confidence. It reveals that there is no significant change on systolic blood pressure as a result of the experimental training. Since the result has revealed that there is no significance difference, among the three groups. Since the difference exists in the adjusted post test mean, further multiple comparison tests was applied.

4. ANALYSIS OF COVARIANCE FOR DIASTOLIC BLOOD PRESSURE

TABLE 6 ANALYSIS OF COVARIANCE FOR DIASTOLIC BLOOD PRESSURE ON PRE TEST AND POST TEST DATA OF EXPERIMENTAL AND CONTROL GROUPS (in Millimetre)

Tests	Concurrent Training Group	Fartlek Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	'F' Ratio
Pre Test								
Mean	87.61	85.48	86.34	B	34.54	2	17.28	0.61
SD	4.86	4.82	6.26	W	1200.68	87	28.60	
Post Test								
Mean	81.68	81.34	84.28	B	77.39	2	38.70	2.09
SD	3.63	3.53	5.51	W	779.61	87	18.57	
Adjusted Post Test								
Mean	81.17	81.79	84.34	B	84.26	2	42.14	3.21
				W	540.03	86	13.18	

* Significant at 0.05 level.

The Required table for df (2&87) at 0.05 level of confidence = 3.22

(2&86) at 0.05 level of confidence = 3.21

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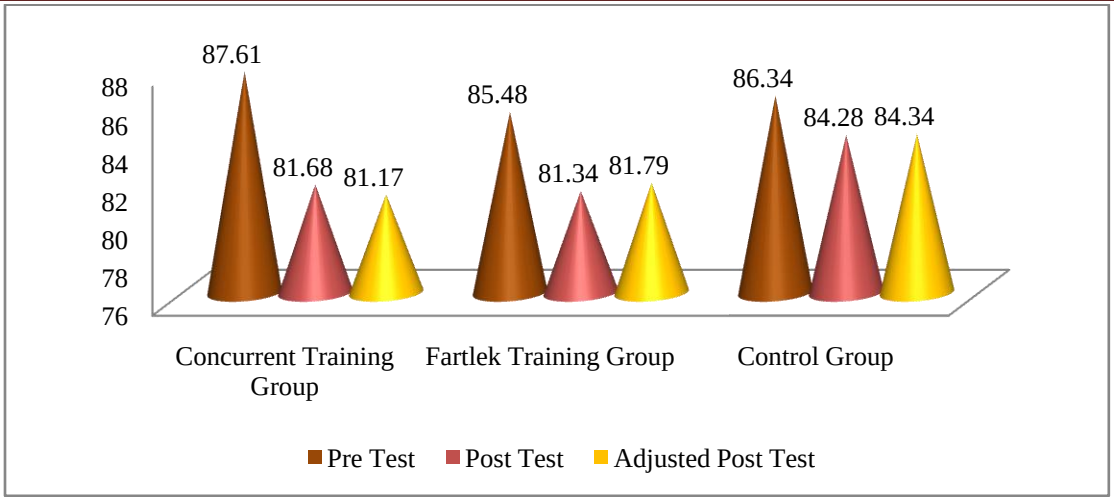

FIGURE 4 GRAPHICAL ILLUSTRATION OF PRE-TEST, POST-TEST AND ADJUSTED POST-TEST MEANS OF EXPERIMENTAL AND CONTROL GROUPS ON DIASTOLIC BLOOD PRESSURE (in Millimetre)

It is derived from table 6 that the pre test means on diastolic blood pressure of the experimental and control groups are 87.60, 85.47 and 86.33 respectively. The obtained 'F' ratio value 0.604 for the pre test mean is lesser than the required table value 3.22 for 2 & 87 degrees of freedom at 0.05 level of confidence. There is no significant difference between the experimental and the control groups on diastolic blood pressure for the pre test data.

The post test means on diastolic blood pressure of the experimental and the control groups are 81.68, 81.34 and 84.28 respectively. The obtained 'F' ratio value 2.09 for the post test data is lesser than the required table value 3.22 for 2 & 87 degrees of freedom at 0.05 levels of confidence. It shows that there is no significant difference between the experimental and the control groups on diastolic blood pressure following the experimental training.

The adjusted post test means on diastolic blood pressure of the experimental and the control groups are 81.17, 81.79 and 84.34 respectively. The obtained 'F' ratio value of 3.21 for the adjusted post test data is lesser than the required table value 3.21 for 2 & 86 degrees of freedom at 0.05 level of confidence. It reveals that there is no significant change on diastolic blood pressure as a result of the experimental training. Since the result has revealed that there is no significance difference, among the three groups. Since the difference exists in the adjusted post test mean, further multiple comparison tests was applied.

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5. ANALYSIS OF COVARIANCE FOR RESTING PULSE RATE

TABLE 7 ANALYSIS OF COVARIANCE FOR RESTING PULSE RATE ON PRE TEST AND POST TEST DATA OF EXPERIMENTAL AND CONTROL GROUPS (in Counts)

Tests	Concurrent Training Group	Fartlek Training Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	'F' Ratio
Pre Test								
Mean	71.21	72.01	70.41	B	19.21	2	9.61	.25
SD	5.07	8.15	5.20	W	1664.01	87	39.63	
Post Test								
Mean	67.48	67.08	71.48	B	177.61	2	88.81	7.68*
SD	2.89	3.29	3.97	W	486.41	87	11.59	
Adjusted Post Test								
Mean	67.48	66.75	71.81	B	222.13	2	111.07	22.27*
				W	204.59	86	4.99	

* Significant at 0.05 level.

The Required table for df (2&87) at 0.05 level of confidence = 3.22
(2&86) at 0.05 level of confidence = 3.21

It is derived from table 7 that the pre test means on resting pulse rate of the experimental and control groups are 71.21, 72.01 and 70.41 respectively. The obtained 'F' ratio value 0.25 for the pre test mean is lesser than the required table value 3.22 for 2 & 87 degrees of freedom at 0.05 level of confidence. There is no significant difference between the experimental and the control groups on resting pulse rate for the pre test data.

The post test means on resting pulse rate of the experimental and the control groups are 67.48, 67.08 and 71.48 respectively. The obtained 'F' ratio value 7.68 for the post test data is greater than the required table value 3.22 for 2 & 87 degrees of freedom at 0.05 levels of confidence. It shows that there is no significant difference between the experimental and the control groups on resting pulse rate following the experimental training.

The adjusted post test means on resting pulse rate of the experimental and the control groups are 67.48, 66.75 and 71.81 respectively. The obtained 'F' ratio value of 22.27 for the adjusted post test data is greater than the required table value 3.21 for 2 & 86 degrees of freedom at 0.05 level of confidence. It reveals that there is significant change on resting pulse rate as a result of the experimental training. Since the result has revealed that there is a significance difference, among the three groups. Since the difference exists in the adjusted post test mean, further multiple comparison tests was applied.

TABLE 8 SCHEFFES POST-HOC TEST FOR MEAN DIFFERENCE BETWEEN GROUPS ON RESTING PULSE RATE (in Counts)

Mean Value			Mean Difference	F' value	C.I
Concurrent Training Group	Fartlek Training Group	Control Group			

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67.48	66.75		0.73	0.83	6.42
67.48		71.81	4.33	28.91*	6.42
	66.75	71.81	5.06	39.48*	6.42

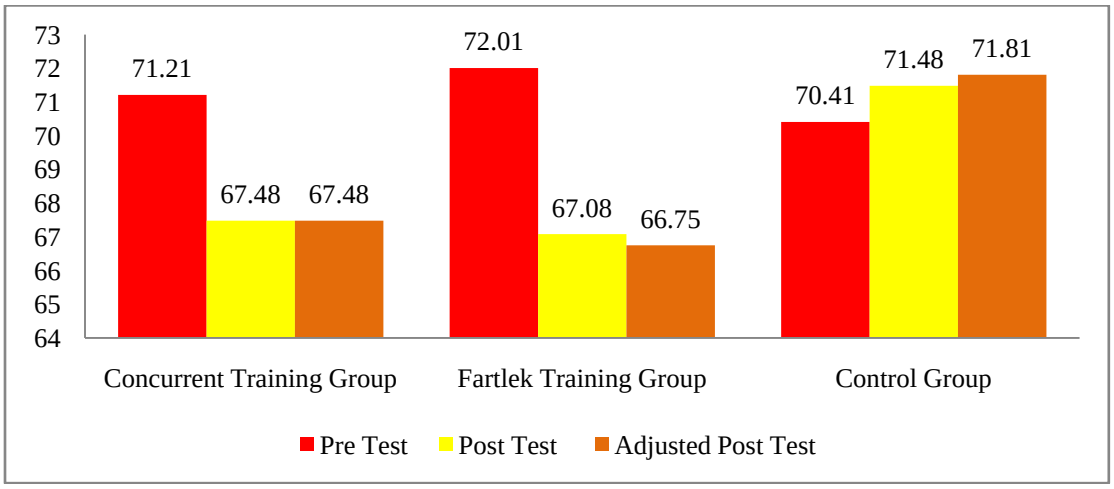

FIGURE 5 GRAPHICAL ILLUSTRATION OF PRE - TEST, POST -TEST AND ADJUSTED POST -TEST MEANS OF EXPERIMENTAL AND CONTROL GROUPS ON RESTING PULSE RATE (in Counts)

Table 8 shows the paired mean difference among the three groups' namely Concurrent Training and fartlek training and control group. The mean difference between Concurrent Training and fartlek training is 0.73, were the f value of mean gains between the Concurrent Training and fartlek training is 0.83, which is lower than the C.I value. Therefore is no significant difference between Concurrent Training and fartlek training. The mean difference between the Concurrent Training and control group is 4.33, were the f value of mean gain between the Concurrent Training and control group is 28.91, which is greater than the C.I value. Therefore is significant difference between Concurrent Training group and control group. The mean difference between the fartlek training and control group is 5.06, were the f value of mean gain between the fartlek training and control group is 39.48, which is greater than the C.I value. So there is significant difference between fartlek training and control group.

CONCLUSIONS

When the two experimental groups were compared to the control group, the physiological variables forced vital capacity (FVC), forced expiratory volume in the first second (FEV1), peak expiratory flow rate (PEFR), maximum expiratory pressure (MEP), maximum inspiration pressure (MIP), 40 mm Hg breath holding time, and resting pulse rate showed significant differences. For all of the above-mentioned physiological indicators, there was no significant difference between the two experimental groups. There was no significant difference in systolic and diastolic blood pressure as a result of concurrent and fartlek exercise.

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