

EFFECT OF SKILL BASED EXERCISE AND HIGH INTENSITY TRAINING ON BIO-MOTOR AND PHYSIOLOGICAL VARIABLES AMONG WOMEN VOLLEYBALL PLAYERS

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ABSTRACT

This study was designed to examine the effects of skill-based exercise and high intensity training on physiological and bio-motor variables among women volleyball players. In order to accomplish the purpose of the study, 45 women volleyball players ranging in age from 17 to 23 years old were recruited from the Chennai region of Tamil Nadu, India. Each group consisted of 15 subjects. A group of participants trained in skill-based exercises, a group of participants trained in high intensity for eight weeks, and a group of participants acted as a control who did not perform any training other than their everyday routine. Dependent variables selected included bio-motor variables like agility and physiology variables like vital capacity. T-tests and wet spirometers were used to test agility and vital capacity. Randomized groups were used in this study both before and after the assessment. In the study, data were collected before and after the eight-week training period. The collected data were analysed statistically by using the 'ANOVA' test, which was used to determine if there was a significant improvement on selected variables from the baseline to the post-training evaluation. Women volleyball players showed significant improvements in agility and vital capacity following skill based exercise and high intensity training.

Keyword: Skill Based Exercise, High Intensity Training, Agility, Vital Capacity, Women Volleyball Players

INTRODUCTION

It is necessary to prepare for a game in order to improve its execution. Like some kinds of human performance, a video game's execution does not come from a single framework or part of the character. A fit person can live a full, balanced life. An individual who is totally fit has a healthy and happy outlook on life. Physical fitness is something that all living beings possess. A stimulating and challenging sport, volleyball has become a prestigious event for academics and experts all over the globe. As an anaerobic sport, volleyball measures phosphagen energy primarily. Each match will last about three hours. A volleyball player's ability to jump and land correctly is critical to their success in competition. Many volleyball players train and compete with high-intensity jumps. Passing, setting, digging, serving, spiking and blocking are the six basic volleyball skills. Passing is often thought of as the most important skill in volleyball. Passing is simply getting the ball to

someone else on your team after it's been served or hit over the net by the opposing team. It's commonly thought of as the most important skill in all of the volleyball because the team can't return the ball without a solid volleyball pass. Forearm volleyball passes are often used to direct the ball in a controlled manner to a teammate, but overhead passing is another option.

HIIT training alternates short bursts of intense anaerobic exercise with short recovery periods until exhaustion is reached, thereby requiring the anaerobic energy releasing system to operate almost exclusively. As HIIT workouts use anaerobic energy systems, most last under 30 minutes. Such workouts are typically used for short, sharp bursts. As well as improving athletic capacity and condition, HIIT workouts increase glucose metabolism as well. The intensity of HIIT depends on an individual's cardiovascular condition, a 2:1 ratio is used for work and recovery sessions.

METHODOLOGY

It was the purpose of the research to determine whether skills based exercises and high intensity training had an impact on bio-motor and physiological variables among women volleyball players. In this study, 45 female volleyball players aged 17 to 23 from Chennai, TamilNadu, India were selected as participants. For eight weeks, they were required to follow a training protocol and train each morning alternately throughout the week.

Group one consists of skill-based exercises, group two consists of high intensity training, and group three consists of a control group. After the training protocol was completed data were collected. Spirometers were used to measure vital capacity and agility. IBM (SPSS Version 26.0) was used to analyze the data, and the statistical technique of ANOVA was applied to each of the 3 groups. The level of confidence was set to 0.05.

RESULT AND DISCUSSION

Table 1.1 SKILL BASED EXERCISE GROUP PRE-TEST, POST-TEST AND ADJUST POST-TEST MEAN VALUE

VARIABLES	PRE TEST	SD	POST TEST	SD
AGILITY	11.56	0.36	11.25	0.32
VITAL CAPACITY	87.89	1.04	85.91	1.37

The table – 4.1 shows that the skill based exercise group pre-test mean and standard deviation values of Agility 11.56 ± 0.36 and vital capacity 87.89 ± 1.04 and the

post-test mean and standard deviation values of Agility 11.25 ± 0.32 and Vital Capacity 85.91 ± 1.37 respectively.

Table 1.2 HIGH INTENSITY TRAINING GROUP PRE-TEST, POST-TEST AND ADJUST POST-TEST MEAN VALUE

VARIABLES	PRE TEST	SD	POST TEST	SD
AGILITY	11.59	0.31	11.08	0.30
VITAL CAPACITY	87.83	1.02	85.28	1.51

The table – 4.2 shows that the high intensity training group pre-test mean and standard deviation values of Agility 11.59 ± 0.31 and vital capacity 87.83 ± 1.02 and the

post-test mean and standard deviation values of Agility 11.08 ± 0.30 and Vital Capacity 85.28 ± 1.51 respectively.

Table 1.3 CONTROL GROUP PRE-TEST, POST-TEST AND ADJUST POST-TEST MEAN VALUE

VARIABLES	PRE TEST	SD	POST TEST	SD
AGILITY	11.67	0.38	11.69	0.38
VITAL CAPACITY	88.10	1.02	88.23	1.02

The table – 4.3 shows that the control group pre-test mean and standard deviation values of Agility 11.67 ± 0.38 and vital capacity 88.10 ± 1.02 and the post-test mean

and standard deviation values of Agility 11.69 ± 0.38 and Vital Capacity 88.23 ± 1.02 respectively.

TABLE 1.4 ANOVA OF EXPERIMENTAL GROUPS AND CONTROL GROUPS

VARIABLES	TEST	SOS	DF	MS	F RATIO
AGILITY	PRE TEST	0.098	2	0.49	0.387
		5.327	42	0.127	
	POST TEST	2.963	2	1.481	12.77*
		4.869	42	0.116	

VARIABLES	TEST	SOS	DF	MS	F RATIO
VITAL CAPACITY	PRE TEST	0.616	2	0.308	0.289
		44.72	42	1.06	
	POST TEST	61.14	2	30.57	17.43*
		73.65	42	1.75	

*Significant at .05 level df 2, 42 table value 3.23

Table 4.4 presents the analysis of variance of Agility (0.387) and Vital capacity (0.289) based on the pre-test F-ratio values. It appears that the F-ratio value obtained was less than the table value, indicating that there was no difference in aggression and vital capacity between the experimental groups and the control group among women volleyball players. Agility and Vital Capacity F-ratios after the test were 12.77* and 17.43*, respectively. As observed, the F-ratio was significantly higher than the table result, indicating that agility and vital capacity among women volleyball players were significantly different in the experimental groups.

Conclusion

The following conclusions have been drawn based on the study's results. Based on skill-based exercise, women volleyball players' agility and vital capacity significantly improved from the baseline to the post-test. Due to the effect of high intensity interval training on women volleyball players, the agility and vital capacity of volleyball players significantly improved between the baseline and post-test.

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