

Evaluating Motor Fitness Components in Female Kho-Kho Players from Jabalpur District: A Modern Training Program Approach

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Abstract

Aim:

The purpose of this study was to determine the effect of a modern training program on selected motor fitness variables of female Kho-Kho players from the Jabalpur District.

Methods:

Forty female athletes from various colleges, who participated in the intercollegiate (District Level) Kho-Kho competition in 2023, were selected as subjects for this study. The participants ranged in age from 18 to 28 years. The study focused on specific motor components, including muscular endurance, speed, agility, and explosive strength of the female Kho-Kho players from the Jabalpur District. The experimental period was limited to four weeks, during which the modern training program was conducted six days a week, excluding holidays. Data were collected before and after the four-week training period.

Hypothesis:

It was hypothesized that there would be no significant effect of the modern training program on the selected motor fitness variables of female Kho-Kho athletes.

Statistics:

To determine the effect of the modern training program on the selected motor fitness variables of the college athletes, a 't' test was conducted. The 't' ratio values of the pre-test and post-test were found to be significant at the 0.05 level.

Results:

There was a significant difference between the pre-test and post-test results for specific motor fitness variables, including the 50m run, shuttle run, standing broad jump, and sit-ups of the female Kho-Kho players from the Jabalpur District. The hypothesis was accepted.

Conclusion:

The results indicate that the modern training program conducted over a four-week period was effective in improving the motor fitness variables of the college athletes.

Keywords: motor fitness & Modern training

Introduction

Physical education in common with all other parts and activities of life, is shaped by the changes that take place in society. Every period in the history of the world has witnessed social changes; during some periods a great many changes have taken place, while at other times society has remained almost static. The first three decades of the present century have been fraught with more great social changes than has any period of the same length in the world's history. The events which accompanied these changes have brought into existence many problems and raised many questions. (Jackson R.)

The term motor fitness became popular during world war II as tests that could be given quickly to many subjects with a minimum of equipment were constructed for

use by various branches of the armed forces and by schools and colleges. Motor fitness is thought to be a limited dimension of general motor ability, (Element of motor fitness) with emphasis placed on the underlying element of vigorous physical activity, but does not include the neuromuscular coordination involved in motor skills (N.P.Sharma).

Modern training is formal type of training in which an athlete goes through a series of selected exercises or activities that are performed in sequence or in a circuit. Circuits can be set up inside gymnasiums, exercise rooms, or outside in courts and fields. There are usually six to ten stations in circuit. The athlete performs a specific exercise at each station and then goes to the next station. The idea is to progress through the circuit as rapidly as possible, attempting to improve either by decreasing the total time it takes to complete the circuit or by increasing the amount of work done at each station, or both, the stations are distributed throughout the area earmarked to circuit training. The greater the distance between stations, the greater the degree of cardiovascular conditioning as the individual runs from one station to next (Anthony A. Annarino).

The ability to run, walk, throw, bend, manipulate the fingers, turn the head, swing a stick, swim a river, climb a mountain or dance has played a major role in man's evolutionary experience. And this role has been not only physical. Movement is basic to any advance which man has made. Whether it be in communication. The expressive arts, exploration, or in the widening of the intellectual or perceptive horizons, movement has been a significant factor either attending the advance or making it possible. (U.K. Singh A.K. Nayak)

Objective of the study:

Assessment of Modern training programme on selected motor fitness components of Female Kho-Kho Players from Jabalpur District.

Methodology:

The study was delimited to the 40 female athletes belonging to the age group 18 to 28 years of Female Kho-Kho Players from Jabalpur District. and delimited to following training period of four weeks Modern training programme. Subjects were oriented to the test of motor fitness variables.

Training Program:

Athletes were gone through with 4 week Modern training program and following set of exercise or training was provide to all athletes those are actively participating in Kho-Kho game at intercollegiate level only for 1 hour.

Table – 1
Modern training Variables

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
400mts run 2 set	50 mts dash 2 set	Burphy jumps 2 set	400mts run 2 set	50 mts dash 2 set	Burphy jumps 2 set
Sit Ups 2 set	10mtsX4 2 set	Sargents Jumps 2 set	Sit Ups 2 set	10mtsX4 2 set	Sargents Jumps 2 set

Push ups 2 set	Hanuman Jumps run 2 set	Squat Thrust 2 set	Push ups 2 set	Hanuman Jumps run 2 set	Squat Thrust 2 set
Pull ups 2 sets	Alternate jump run 2 set	Callisthenic Exercise 2 set	Pull ups 2 sets	Alternate jump run 2 set	Callisthenic Exercise 2 set

The subjects were selected each test and administrated of 50 mts. Run, Shuttle run, Standing Broad jump and sit-ups. All the above tests on the decided on the basis of book “Test and measurement” by kansal and “A practical approach to measurement in physical education” by Harold M. Barrow.

Hypothesis

It was hypothesized that there was a significant effect of Modern training programme on selected motor fitness components of Female Kho-Kho Players from Jabalpur District.

Criterion Measure

The following criterion measures were included the record the readings of various test items of motor fitness components.

- i. The score of Abdominal Muscular Strength made by the individual on Bend Knee Sit-Ups Test. The score was recorded as the total number of correct sit-ups in sixty seconds.
- ii. Leg strength was measured by Standing Broad Jump Test and it was recorded in Meters.
- iii. Coordinative ability was measured by Shuttle Run and it was recorded in seconds.
- iv. Speed running was measured by 50 mts and the score was recorded to the seconds.

All the subjects had given proper response in the test. Mean of pre-test and Post-Test of four fitness variables are calculated. Standard Deviation of Pre-test and Post-test of fitness variables are also calculated by using SPSS 16th version..

The subjects score on 50m. Run, shuttle Run, Standing Broad Jump and Sit-ups test conducted before and after the experimental period constituted the score for the purpose of the study. For testing the difference between Pre-test and Post-test the level of confidence was set at 0.05.

Results

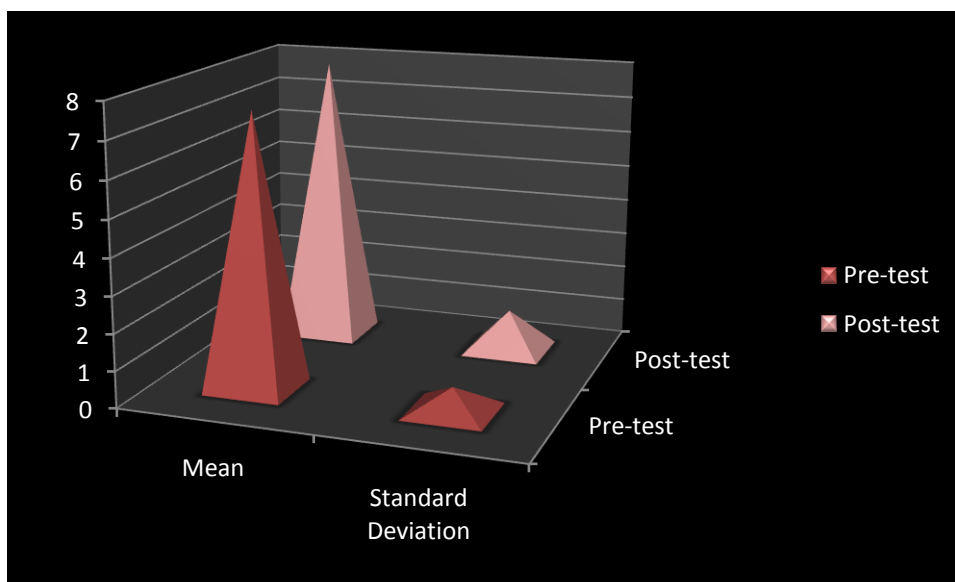
Table no. 1
Comparison of Means of Selected motor fitness components of pre test and post test of 50 mts. Run

Test	Mean	Standard Deviation	Mean Difference	Standard Error	't' Ratio
Pre-test	7.50	.67	-.38	.147	3.34*
Post-test	7.93	1.14			

*Significant at 0.05 level.

t.05 (38) =2.04

The mean value of Pre-test and Post-test of 50m. Run is 7.50 and 7.93 respectively. Standard deviation value of pre-test and Post-test is 0.67 and 1.14 respectively. Value of 't' ratio is 3.34, this value of 50m. run is significant at 0.05 level. To be significant at 0.05 level, the value of 't' ratio should be greater than or equal to 2.04.



Graph No. 1- Shows the pre-test and post-test mean of 50m. run

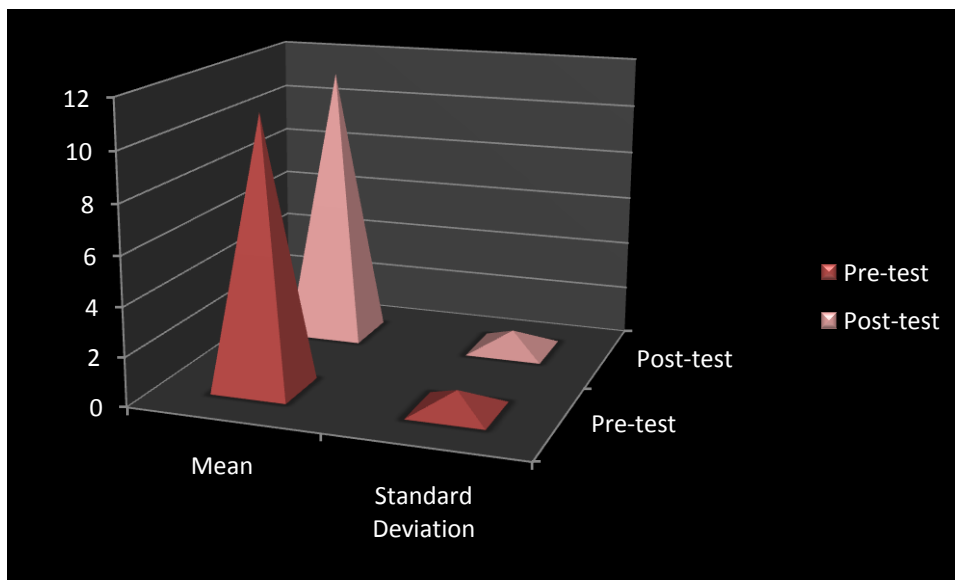
Table no. 2
Comparison of Means of Selected motor fitness components of pre test and post test of Shuttle run

Test	Mean	Standard Deviation	Mean Difference	Standard Error	't' Ratio
Pre-test	11.02	.83	-.05	.12	3.89*
Post-test	11.33	.79			

*Significant at 0.05 level.

t.05 (38) =2.04

The mean value of Pre-test and Post-test of Shuttle Run is 11.02 and 11.33 respectively. Standard deviation value of pre-test and Post-test is .83 and .79 respectively. Value of 't' ratio is 3.89, this value of Shuttle Run is insignificant at 0.05 level. To be significant at 0.05 level, the value of 't' ratio should be greater than or equal to 2.04.



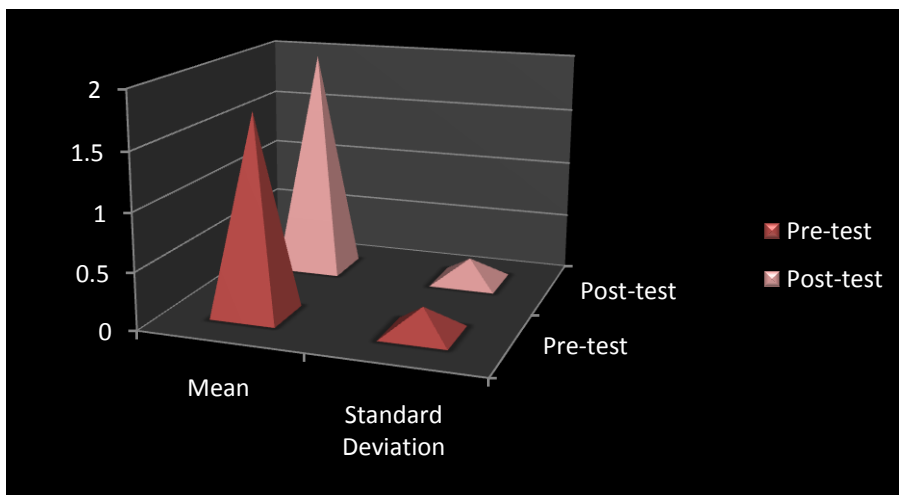
Graph no. 2- Shows the pre-test and post-test mean of shuttle run

Table no. 3
Comparison of Means of Selected motor fitness components of pre test and post test of Standing Broad Jump

Test	Mean	Standard Deviation	Mean Difference	Standard Error	't' Ratio
Pre-test	1.74	.23	-.18	.0042	3.12*
Post-test	1.99	.21			

*Significant at 0.05 level.
t.05 (38) =2.04

The mean value of Pre-test and Post-test of Standing Broad Jump is 1.74 and 1.99 respectively. Standard deviation value of pre-test and Post-test is 0.23 and 0.21 respectively. Value of 't' ratio is 3.12, this value is insignificant at 0.05 level. To be significant at 0.05 level, the value of 't' ratio should be greater than or equal to 2.04.



Graph no. 3- Shows the pre-test and post-test mean of standing broad jump

Table no. 4

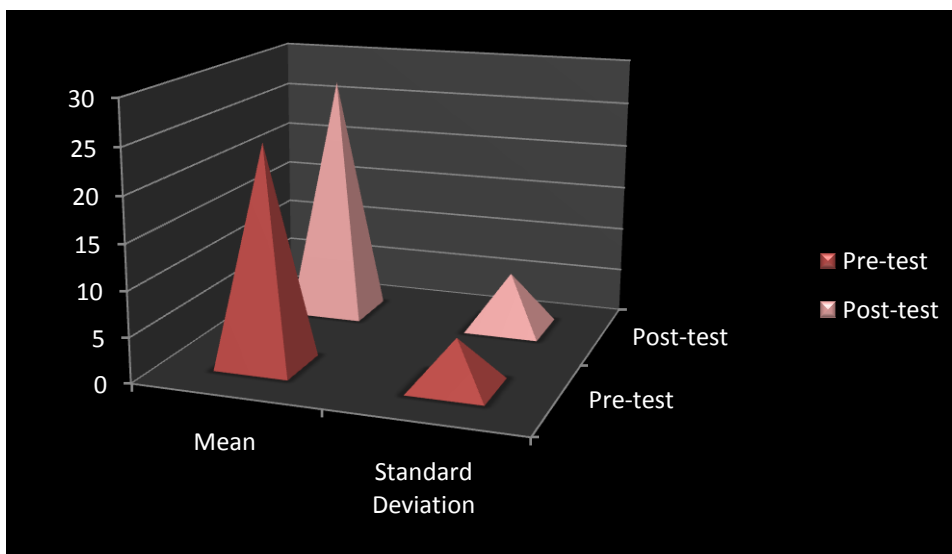
Comparison of Means of Selected motor fitness components of pre test and post test of Sit ups

Test	Mean	Standard Deviation	Mean Difference	Standard Error	't' Ratio
Pre-test	24.24	5.33	-.26	1.49	2.98*
Post-test	27.32	6.34			

*Significant at 0.05 level.

$t_{.05}(38) = 2.04$

The mean value of Pre-test and Post-test of Sit-ups is 24.24 and 27.32 respectively. Standard deviation value of pre-test and Post-test is 5.33 and 6.34 respectively. Value of 't' ratio is 2.98, this value of Sit-ups is significant at 0.05 level. To be significant at 0.05 level, the value of 't' ratio should be greater than or equal to 2.04.



Graph No. 4 -Shows the pre-test and post-test mean of sit – ups

Discussion of Findings

From the analysis of data it was evident that the mean of Post-test was improved, it proved that, the motor fitness of the athletes determined by other factors like heredity, sex, diet and age it also found that the four weeks of Modern training programs is sufficient to improve the motor fitness of Female Kho-Kho Players of Jabalpur District.

The hypothesis stated earlier that there would be significance effect of Modern training programme on selected motor fitness components of Female Kho-Kho Players of Jabalpur District players were accepted.

Conclusions

There was significant difference of Pre-test and Post-test of specific motor fitness variables like 50m.Run, shuttle run, standing broad-jump and sit-ups of Female Kho-Kho Players of Jabalpur District.

The above results help to conclude that Modern training exercise for the period of four weeks was effective to improve the motor fitness variables of Female Kho-Kho Players of Jabalpur District

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