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“A STUDY ON PHYSICAL FITNESS AMONG INDIAN WOMEN CRICKETERS ”

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ABSTRACT:

The present study was prepared for the Women Cricketers to study on their strength in relation anthropometric measurement. The particular study reveals the physical capability among Women cricketers of Indian Universities. In this study an attempt was made to analyze the physical fitness of women cricket players of different zones of Indian Universities. The study was framed to deal arm strength fitness quality to assess the impact on Indian university women cricket players in five zones of India. They are East, West, South, North and Central. And all the data were collected in national tournament held at Pradesha Jaunpur University. In this research work 150 subjects were selected as samples from full team of every zone. Hence, the national qualified teams will be selected as the samples for this study. The collected data were analyzed through t test anova test.



This study was pretended to outtake of difference of arm strength among different zones of India. And also this study describes the possibilities and effects of performance on women cricket abilities. Finally, this study may help to all women cricketers to assess their arm strength quality compare to other state and zone players. This will help to the women cricketers to develop their standard of arm strength quality as per the requirement of the game. Arm strength is the basic fitness component to develop the throwing ability, catching ability to hit harder in short term overs match like 20-20 matches. The study will definitely give the some of the important and need factors to the coaches, trainers, University directors and college sports directors to set the selection criteria in better selection method.

KEYWORDS: Women Cricketers , physical capability , physical fitness.

INTRODUCTION :

Modern man is no longer required to lead a vigorous outdoor life in saving devices. Hence, he is tempted to lead sedentary life. Leading to a stage of Physical degeneration and mental de-arrangement. Fitness plays an important role in building up a strong Nation.

The modern advent of Science and technology and the push button system has made children succumb to a state of inactivity which has physical lead not only to atrophy of life to lack of The physical fitness or condition is the sum total of five motor ability namely strength, speed, endurance, flexibility, and

co-coordinative abilities. These five motor abilities and their complex forms are the basic requirements for human motor actions. Therefore, the sports performances in all sports depend to a great extent on their abilities. The imprudent and maintenances of physical fitness or condition is perhaps the five

most important aim of sports training.

William lathan stated that the arm strength is the capacity of the individual to perform successive movements of the same pattern at a faster rate. Arm strength is the needed power capacity of a muscles and bones. The capacity for throwing, power hitting in slog overs. The Arm strength is an integral part of every sport and can express as any one of, or combination of, the following: Maximum Arm strength, elastic strength and arm strength endurance. The improvement of strength of arm most needed for Indian women cricketers to give the competition at international matches equal competition. The improvement in repeated sprint ability is similar results previously reported in cricket players after training programs containing similar arm strength sessions, but combined with additional training according to their zonal requirement training.

Hand grip strength:

To measure the arm and shoulder strength of the subjects.

Purpose:

The purpose of this test is to measure the maximum isometric strength of the hand and fore arm muscles. Hand grip strength is important for any sport in which the hands are used to catching, throwing and lifting.

Equipment: Hand grip Dynamometer.

Procedure:

The subjects hold the dynamometer in the hand to be tested, with the arm at right angles and the elbow by the side of the body. This is maintained for 5 seconds. No other body parts movement is allowed. The subject strongly encouraged to give a maximum effort.

Scoring:

The best result from several trails for each hand is recorded, with at least 15 seconds recovery between each effort. 64 kg consider excellent, up to 56-64 rates very good, 52-55 average, 48-51 below the average

HAND GRIP STRENGTH:

It was hypothesized that there would be a significant difference in the Strength between all the subjects of this study. Hand Grip strength is the force applied by the hand to pull on or suspend from objects and is specific part of hand strength. With hand problems, muscle strength usually based on grip strength and pinch strength dynametry.

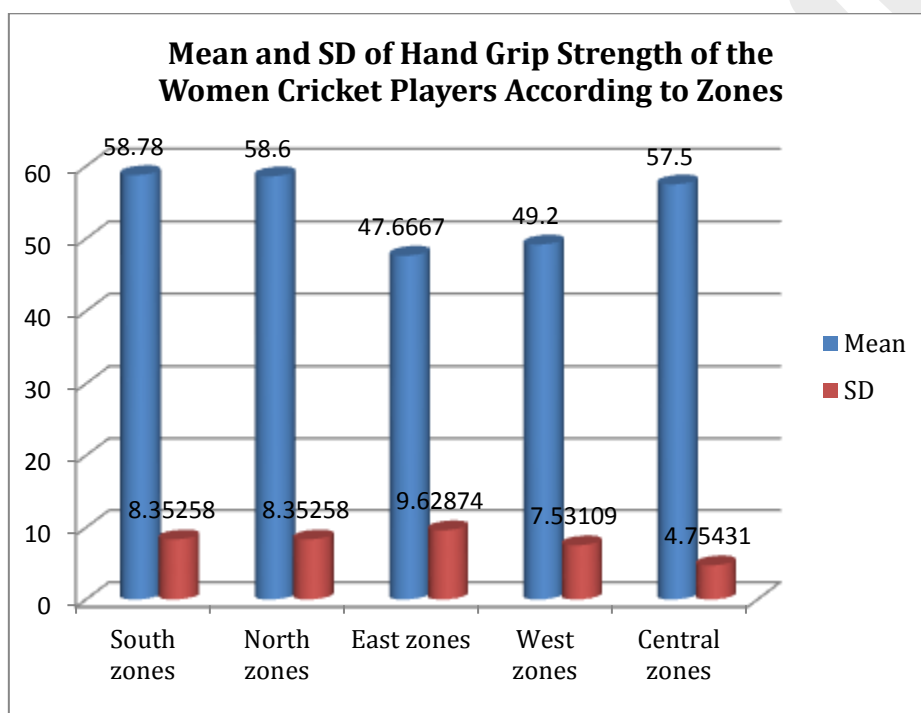
Strength is the most requirement for any sports and games. Hence, this hand grip strength has taken to consider the major parameter for determine the quality of the arm strength in different zones of Indian University.

The purpose of this test is to measure the maximum isometric strength of the hand and forearm muscle of the women cricketers of Indian University. Hand grip strength is important for the cricket sport in which hands are more use for catching, throwing balling and batting. In the game of cricket strength is must require element in all the departments like balling, batting and fielding. Hence, in this study the result shown that all the Indian regions women Cricket players have different than the other zone, which zone is in good position in motor ability that is hand grip strength. And also it reveals the impact of the height and weight and hand grip strength.

Table No.-1
Mean and SD of Hand Grip Strength of the Women Cricketers According to Zones

Sl. No	Zones	N	Mean	Std. Deviation
1	South zones	30	58.7800	8.35258
2	North zones	30	58.6000	8.35258
3	East zones	30	47.6667	9.62874
4	West zones	30	49.2000	7.53109
5	Central zones	30	57.5000	4.75431
	Total	150	54.3133	9.17842

Graph 1



RESULTS AND FINDINGS:

The results of Table show the means and standard deviations of Right Hand Grip Strength of the women cricket players according to zones. The total mean score Right Hand Grip Strength of the women cricket players is 54.3133 ± 9.17842 . In which, the south zone women cricket players have higher Right Hand Grip Strength (58.7800 ± 8.35258) as compared to east zones women cricket players under study (47.6667 ± 9.62874). The means and standard deviations of Right Hand Grip Strength of the women cricket players according to zones are also presented in the following figure.

Table 2
Results of ANOVA-test between zones (South, North, And East, West And Central) of women's cricket players with Respect to Hand GripStrength

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3516.907	4	879.227	14.110	.000
Within Groups	9035.367	145	62.313		
Total	12552.273	149			

RESULTS AND FINDINGS:

The women cricket players belonging to different zones (south, north, and east, west and central) differ significantly with respect to Right Hand Grip Strength ($F=14.110$, $p<0.05$) at 0.05% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the women cricket players belonging to different zones (South, North, East, West and Central) have different Right Hand Grip Strength. It means that Right Hand Grip Strength of the south zones women cricket players is more when compared to that of the east women cricket players.

DISCUSSION AND FINDINGS OF LEFT HAND GRIP STRENGTH:

It was hypothesised that the zonal influence would act as predict factors on the l hand grip strength. Hence, the hypothesis were framed that on age, sex, heredity, personal habits, exercise, diet and particular region effect. It is predicted that the training of the players on particular variable has effect a lot. Hence, the hypothesis the effect of environment may effect on motor ability was considered. The effect of anthropometric measurement was completely impact on the performance of the motor ability that is hand grip strength. Height is contributed 11% and weight has contributed 25% .It shows that there may impact on the individual differences and also the effect of zone impacted on the performance of the players. Hence, the effect of anthropometric measurement statistically proved.

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