



## COMPARATIVE STUDY OF PHYSICAL PARAMETERS OF ACTIVE AND SEDENTARY WOMEN

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### Abstract:

#### Introduction:

Discrimination against women especially in case of sports participation is done many times. But it is pleasing to note that such practices have changed to a great extent especially in other countries. However, in India too the scenario is changing. Today more number of female athletes are taking part in the competitive sports.

We consider Health to be simply the absence of disease. Today we view it also as the presence of vitality – the ability to function with vigor and to live life actively, energetically, and fully. Vitality comes from wellness, a state of optimal physical, emotional, intellectual, spiritual, interpersonal, social, environmental, and even planetary well-being.

Technological advances have made our lives increasingly inactive and sedentary. Growing evidence points to lack of physical activity as a prime contributing factor to the array of perplexing degenerative diseases. Research concluded that exercise and physical activity are good for our health.

Our body is a wonderful moving machine, designed to be active. But our body is made to work best when it is active. Left unchallenged, bones lose their density, joints stiffen, muscles become weak, and cellular energy systems begin to degenerate. To be truly well, one must be active. Many people who play sports feel that physical performance is an integral part of an active and exciting lifestyle.

Although compiling an all-inclusive list of the benefits reaped through a

comprehensive fitness program is difficult, the following list provides a summary of many of these benefits :-

Improves and strengthens the cardio-respiratory system.

- Maintains muscle tone, strength, endurance & improves muscular flexibility.
- Lowers the risk for chronic diseases and illness.
- Decreases the risk for coronary heart disease and strokes.
- Lowers blood pressure & prevent diabetes.
- Helps people sleep better & relieves tension.
- Raises levels of energy and job productivity & slows down the aging process.

#### Statement of the problem

Statement of the Problem is:

“Comparative study of Physical Parameters of Active and Sedentary Women”.

#### Objectives of the study

Following are the objectives of this study:

- 1) To study the aging effect of active and sedentary women.
- 2) To study the physical parameters like Strength and Flexibility of active and sedentary women.
- 3) To compare the physical parameters of active and sedentary women.

#### Delimitations

- 1) The study was delimited to women only.
- 2) The study was delimited to the women of Nagpur city only.
- 3) The concept of active women was delimited to women players who had

represented at-least inter-school or inter-collegiate or inter-clubs in any kind of game.

- 4) The concept of sedentary women was delimited to the non-player women who had never played a competitive sports in any kind of game.
- 5) The age groups were delimited to completed 32 to 37 years.
- 6) The study was delimited to twenty-five women of each age group.
- 7) The Right-hand grip strength was tested of right handed subject and Left-hand grip strength was tested of left handed subject.
- 8) The physical parameters were delimited to: i) Abdominal strength, ii) Grip strength, iii) Flexibility

#### Limitations

There was no control over the diet, interest, attitude, religion, environment, heredity and the health conditions of the subjects. Hence, these were the limitations of this study.

#### Hypothesis

It is hypothesized that Active Women are superior in Physical Parameters.

#### Chapter III

#### METHODOLOGY

##### Selection of samples

Total fifty subjects were selected for the purpose of this study. Twenty five Active women were selected from the population who had represented at-least inter-school or inter-collegiate or inter-clubs in any kind of game from 32 to 37 yrs age group (completed age). Twenty five Sedentary women were selected from the population who had never played a competitive sports in any kind of game from 32 to 37 yrs age group (completed age).

##### Criterion measures

Physical parameters like abdominal strength, grip strength and flexibility were taken as 'Criterion Measures' for the purpose of this study.

##### Procedure of administration of tests

Before administration of the tests, all tests and testing procedures were explained to the subjects in detail so that there would not have doubts in their minds regarding performance of tests. Following tests were conducted:

i) Abdominal Strength : AAHPERD Modified Sit-Ups Test.

ii) Grip Strength: Grip Strength Test.

iii) Flexibility: Sit and Reach Test.

#### Chapter IV

#### ANALYSIS OF DATA

##### Statistical Analysis

The collected data was analyzed with the help of suitable statistical procedures, 't' test was applied to make comparison between active and sedentary women. The level of significance was 0.01 level for this study. The raw data was tabulated with the help of proper procedure and graphical representation was made wherever necessary. The tabulated data and graphical representation of data is presented in this chapter.

Table-1. Table Showing the Comparison between the means of Active and Sedentary Women test scores of AAHPERD 1 min. Sit-ups test on the basis of 't' ratio

(Age Group – 32 to 37 years)

M1 Active women	M2 Sedentary women	D.M	S.E	't' ratio	Requi red 't' value
23.44	8.32	15.12	2.42	6.26*	2.68

\*Significant at 0.01 level

Table 1 reveals that:

The mean values in case of AAHPERD 1 min. Sit-ups test of Active and Sedentary women were 23.44 and 8.32 respectively. Thus, the difference between the means was 15.12. In case of AAHPERD 1 min. Sit-ups, the difference was found statistically significant at 't' test. The 't' ratio obtained in respect of AAHPERD 1 min. Sit-ups was 6.26. For the mean difference to be significant at 0.01 level of confidence, the 't' value to be obtained should be greater than 2.68.

Table-2. Table Showing the Comparison between the means of Active and Sedentary Women test scores of Grip Strength test on the basis of 't' ratio (Age Group – 32 to 37 years)

M1 Active women	M2 Sedentary women	D.M	S.E	't' ratio	Requi red 't' value
26.12	20.24	5.88	1.27	4.64*	2.68

\*Significant at 0.01 level

Table 2 reveals that:

The mean values in case of Grip Strength test of Active and Sedentary women were 26.12 and 20.24 respectively. Thus, the difference between the means was 5.88. In case of Grip Strength, the difference was found statistically significant at 't' test. The 't' ratio obtained in respect of Grip Strength was 4.64. For the mean difference to be significant at 0.01 level of confidence, the 't' value to be obtained should be greater than 2.68.

Table-3. Table Showing the Comparison between the means of Active and Sedentary Women test scores of Sit & Reach test (Flexibility) on the basis of 't' ratio (Age Group – 32 to 37 years)

M1 Active women	M2 Sedenta ry women	D.M	S.E	't' ratio	Requ ired 't' value
9.85	3.78	6.07	1.68	3.61*	2.68

\*Significant at 0.01 level

Table 3 reveals that:

The mean values in case of Sit & Reach test of Active and Sedentary women were 9.85 and 3.78 respectively. Thus, the difference between the means was 6.07. In case of Sit & Reach, the difference was found statistically significant at 't' test. The 't' ratio obtained in respect of Sit & Reach was 3.61. For the mean difference to be significant at 0.01 level of confidence, the 't' value to be obtained should be greater than 2.68.

Discussion of Hypothesis

1. It is hypothesized that Active Women are superior in Physical Parameters.

The hypothesis on the basis of result of this study is accepted.

## Chapter V SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

### Summary

The intention of this study was to know the general fitness condition of women and to compare various Physical Parameters of Active (Players) and Sedentary Women (Non-Players). Total fifty subjects were randomly selected for the purpose of this study. Twenty five Active women were selected from the population who had represented at-least inter-school or inter-collegiate or inter-clubs in any kind of game from thirty-

two to thirty-seven age group (completed age). Most of the subjects (active women) selected for this study had participated at state or national level games. Total twenty-five active women were selected for this age group. Twenty-five Sedentary women were selected from the population who had never played a competitive sports in any kind of game from the same age group (completed age). Physical parameters like abdominal, grip strength and flexibility were selected. Various related tests were administered and data was gathered from various offices, schools, institutions and residences for the purpose of this study. The collected data was analyzed with the help of suitable statistical procedures and 't' test was applied to make comparison between active and sedentary women data scores. The level of significance was 0.01 level for this study.

### Conclusions:

In the light of result of this study following conclusions are drawn:

1. In case of Sit-ups, statistical significant difference was found.
  2. In case of Grip Strength, statistical significant difference was found.
  3. In case of Sit & Reach, statistical significant difference was found.
- So, it was found that Active women are superior in physical parameters like Abdominal Strength, Grip Strength and Flexibility than sedentary women.

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