

**Relationship of Anthropometric Variables with the
Performance Score of Women Athletes of Universities of
Punjab**

*A Thesis
Submitted in Fulfilment of the Requirements for the Award of
the degree of*

DOCTOR OF PHILOSOPHY

IN

Physical Education

By

Ms. Prabhjot Kaur

Roll No: - A157811012

Supervisor

Dr. Ravinder Singh Sumal

Associate Professor



University College of Physical Education

Guru Kashi University

Talwandi Sabo (PUNJAB), INDIA

2019

CHAPTER – V

5. Summary, Conclusions and Recommendations

5.1. Summary

It was a experimental type study, which was designed to scrutinize the Relationship of Anthropometric Variables with the Performance Score of Women Athletes of Universities of Punjab. To achieve this purpose total ninety (N = 90) inter college level women athletes between the age group of 18- 28 years from Guru Nanak Dev University Amritsar, Punjabi University Patiala, Panjab University Chandigarh, were selected as subjects. Only position holder women athletes in Inter college competitions were considered in this study. The study was delimited to 30 women athletes of each university. The 90 women athletes were selected from each event of athletics (4X400 Relay, Long Jump & Discus Throw) equally.

The availability of the techniques, feasibility and reliability of the procedure and the outcome were extensively analysed and on various factors associated with the problem, certain variables were selected to test during the study. Based on the above mentioned concept, fourteen anthropometric variables namely Height, Weight, Biceps muscle girth, Total arm length, Leg length, Shoulder width, Hip width, Elbow width, Knee width, Suprailiac skin fold, Triceps skin fold, Sub-scapular region skin fold, Calf skin fold and Biceps skin fold were selected for present study. The collected data was converted in form of table and was presented with the help of various bar graph and diagram. To scrutinize the relationship of anthropometric variables with the performance score of women athletes of Universities of Punjab, Karl Pearson's product moment coefficient correlation statistical technique was used with the help of SPSS – 20 by the investigator. The level of significance was set at 0.05 percent. After the analysis of data, research has found that there was partial significant relationship of anthropometric variables with the performance score of women athletes of universities of Punjab.

5.2. Conclusions

On the basis of above findings of present study, the following conclusions were drawn by the investigator:

- 5.2.1** It was concluded that there was significant relationship of height with the performance score of women long jumpers of universities of Punjab.
- 5.2.2** It was concluded that there was significant relationship of weight with the performance score of women long jumpers of universities of Punjab.

- 5.2.3** After the analysis of data, it was concluded that there was insignificant relationship of biceps muscle girth with the performance score of women long jumpers of universities of Punjab.
- 5.2.4** It was concluded that there was insignificant relationship of total arm length with the performance score of women long jumpers of universities of Punjab.
- 5.2.5** After the analysis of data, it was concluded that there was insignificant relationship of leg length with the performance score of women long jumpers of universities of Punjab.
- 5.2.6** It was concluded that there was significant relationship of shoulder width with the performance score of women long jumpers of universities of Punjab.
- 5.2.7** After the analysis of data, it was concluded that there was insignificant relationship of hip width with the performance score of women long jumpers of universities of Punjab.
- 5.2.8** After the analysis of data, it was concluded that there was insignificant relationship of elbow width with the performance score of women long jumpers of universities of Punjab.
- 5.2.9** It was concluded that there was insignificant relationship of knee width with the performance score of women long jumpers of universities of Punjab.
- 5.2.10** After the analysis of data, it was concluded that there was insignificant relationship of suprailiac skin fold with the performance score of women long jumpers of universities of Punjab.
- 5.2.11** It was concluded that there was insignificant relationship of triceps skin fold with the performance score of women long jumpers of universities of Punjab.
- 5.2.12** It was concluded that there was significant relationship of sub-scapular region skin fold with the performance score of women long jumpers of universities of Punjab.
- 5.2.13** After the analysis of data, it was concluded that there was significant relationship of calf skin fold with the performance score of women long jumpers of universities of Punjab.
- 5.2.14** It was concluded that there was insignificant relationship of biceps skin fold with the performance score of women long jumpers of universities of Punjab.
- 5.2.15** After the analysis of data, it was concluded that there was insignificant relationship of height with the performance score of women sprinters of universities of Punjab.
- 5.2.16** After the analysis of data, it was concluded that there was insignificant relationship of weight with the performance score of women sprinters of universities of Punjab.
- 5.2.17** It was concluded that there was insignificant relationship of biceps muscle girth with the performance score of women sprinters of universities of Punjab.
- 5.2.18** After the analysis of data, it was concluded that there was insignificant relationship of total arm length with the performance score of women sprinters of universities of Punjab.

- 5.2.19** It was concluded that there was significant relationship of leg length with the performance score of women sprinters of universities of Punjab.
- 5.2.20** After the analysis of data, it was concluded that there was insignificant relationship of shoulder width with the performance score of women sprinters of universities of Punjab.
- 5.2.21** It was concluded that there was significant relationship of hip width with the performance score of women sprinters of universities of Punjab.
- 5.2.22** After the analysis of data, it was concluded that there was significant relationship of elbow width with the performance score of women sprinters of universities of Punjab.
- 5.2.23** It was concluded that there was insignificant relationship of knee width with the performance score of women sprinters of universities of Punjab.
- 5.2.24** It was concluded that there was insignificant relationship of suprailiac skin fold with the performance score of women sprinters of universities of Punjab.
- 5.2.25** After the analysis of data, it was concluded that there was insignificant relationship of triceps skin fold with the performance score of women sprinters of universities of Punjab.
- 5.2.26** It was concluded that there was insignificant relationship of sub-scapular region skin fold with the performance score of women sprinters of universities of Punjab.
- 5.2.27** After the analysis of data, it was concluded that there was insignificant relationship of calf skin fold with the performance score of women sprinters of universities of Punjab.
- 5.2.28** It was concluded that there was insignificant relationship of biceps skin fold with the performance score of women sprinters of universities of Punjab.
- 5.2.29** After the analysis of data, it was concluded that there was significant relationship of height with the performance score of women discus throwers of universities of Punjab.
- 5.2.30** It was concluded that there was insignificant relationship of weight with the performance score of women discus throwers of universities of Punjab.
- 5.2.31** After the analysis of data, it was concluded that there was significant relationship of biceps muscle girth with the performance score of women discus throwers of universities of Punjab
- 5.2.32** After the analysis of data, it was concluded that there was significant relationship of total arm length with the performance score of women discus throwers of universities of Punjab
- 5.2.33** It was concluded that there was significant relationship of leg length with the performance score of women discus throwers of universities of Punjab.
- 5.2.34** After the analysis of data, it was concluded that there was significant relationship of shoulder width with the performance score of women discus throwers of universities of Punjab.

- 5.2.35** It was concluded that there was significant relationship of hip width with the performance score of women discus throwers of universities of Punjab.
- 5.2.36** It was concluded that there was significant relationship of elbow width with the performance score of women discus throwers of universities of Punjab.
- 5.2.37** After the analysis of data, it was concluded that there was insignificant relationship of knee width with the performance score of women discus throwers of universities of Punjab.
- 5.2.38** It was concluded that there was insignificant relationship of suprailiac skin fold with the performance score of women discus throwers of universities of Punjab.
- 5.2.39** After the analysis of data, it was concluded that there was insignificant relationship of triceps skin fold with the performance score of women discus throwers of universities of Punjab.
- 5.2.40** It was concluded that there was insignificant relationship of sub-scapular region skin fold with the performance score of women discus throwers of universities of Punjab.
- 5.2.41** After the analysis of data, it was concluded that there was insignificant relationship of calf skin fold with the performance score of women discus throwers of universities of Punjab.
- 5.2.42** After the analysis of data, it was concluded that there was insignificant relationship of biceps skin fold with the performance score of women discus throwers of universities of Punjab.

5.3. Recommendations for Future Research

The following recommendations have been made on the bases of findings of present research, researcher's own experience and existing literature.

- 5.3.1 After the completion of present research work, the results of this study can be included in forthcoming books to add or update existing knowledge in the field of anthropometry and sports.
- 5.3.2 With the financial support by concerned governmental organizations, similar study can be conducted on large population.
- 5.3.3 It is recommended that the similar study can be conducted on subjects of other age groups.
- 5.3.4 Similar study can be carried out on male subjects also.
- 5.3.5 Similar study may be conducted on the players of All India Inter University, National and International level.
- 5.3.6 The results of the present study may be helpful in talent identification of Discus Throwers, Long Jumpers and Sprinters.