

ROLE OF STATISTICS IN PHYSICAL EDUCATION AND SPORTS

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ABSTRACT

The purpose of this study was role of statistics in any scientific investigation. We find its principles and theory are used at every step. While planning an experiment, it has to be seen whether it is statistically feasibly to investigate or not? Once an experiment has been framed then statistical technique and to theory is used, to decide the sampling plan, to design experiment, and to choose appropriate statistical technique for drawing statistical conclusion. It is only after statistical finding is made, logical conclusion is drawn. Thus we define the statistics in physical education sports.

Keywords: *Sports, Statistical, Technique, Questionnaire, Experiment, Planning etc.*

I INTRODUCTION

During last few years statistics have assumed a significant role in physical education and sports. Using statistics in the research articles to infer the finding have become a very common feather. But somehow or other this area is still in the infancy stage as far as its application in sports research is concerned. The scholar has confusion that one who does not have a mathematical background cannot make a dent in this area. In fact what is expected from the professional is to appreciate the concept of various statistical techniques for better understanding and viewing correctly the problem encountered in sports research.

Statistics provide us a scientific basis to our inferences drawn from experimental results. Role of statistic in any scientific investigation, we find its principal and theory are used at every step. While planning an experiment, it has to be seen whether it is statistically feasible to investigation.

II NEED OF STATISTICS IN PHYSICAL EDUCATION

- 1. To understand the literature:** one cannot read much of the literature in the physical education and sports encountering statistical concepts method and techniques. Without proper understanding of the fundamentals of statistics I is very difficult to interpret and digest the result mentioned in the research articles with a result very purpose of the article may not be clear to the student and he/she loses in the interest in reading.
- 2. To construct the research problems:** there is much difference between as abstract and rational thinking. A researcher needs to know in advance about his reasonable hypothesis which he wishes to be verified. He must be aware of proper statistical design and techniques which are possible to implement in his problem. Thus it is not possible to construct the rationally correct research problems without proper appreciation of statistical concepts and technique.

3. **To develop scientific temper:** Statistical is essential part of any profession and training programme so is true in case of physical education too in order to help the students to think rationally about any situation. During the match a player's decision for any move is purely based upon his scientific thinking. Infact a coach visualises the training schedule of his trainee based upon his decision derived from his previous experience. All this is possible only if one observes any fact accurate as per the scientific arguments.
4. **To asses the faithfulness of research findings and to contradict the unjustifiable claims:** Several researchers publicly announce their finding based their research work. In order to assess the faithfulness of their statement one can read their research report. But to prove the conformity between their statements and the actual fact one should be able to understand the statistical techniques used the actual report for drawing conclusion. Many companies make a claim about their product by using research finding of the scientists. These claims may be tested by conducting an experiment under the required condition and analysing the data. For example if a fitness lab announces that his oral tablets reduce 10 kg. Weight in 15 days, this claims may be tested by actually conducting the experiment. Normally in making such claims companies hide various other facts which are required to justify their claims, for instance, they may not reveal for which age group and weight group the finding is true. Thus, knowledge of designing an experiment and various statistical techniques are essential to write off the unjustifiable claims.
5. **To develop the indices on various characteristics and performance:** In order to assess and academic excellence of a student, his performance in the examination is used as an index. Similarly, to assess the general fitness of a college student an index is required. Although several authors have suggested ways and means to find an index to measure various characteristics of an individual and for the measurement o performance on different events in sports. But it requires lot of statistical concepts to future improve the quality of such indices.
6. **To develop norms on various traits:** Performance on any trait like sit-ups, pull-ups and push-ups etc. need to be converted into a score by using a scale ranging from 0 to 100, to motivate a student. Conversion of such performance is known as norms. Such norms are easily understood by a common man can be used in the admission procedure of the students in schools and colleges.
7. **To conduct research:** statistical concepts and techniques are important in designing an experiments in drawing a representative sample, in administering the test and in choosing the correct statistical test for conducting research and interpreting the results. Thus it is extremely important to have an appropriate knowledge of statistical concepts, methods and technique to conduct a research in an accurate manner for drawing the result reliable conclusions.

III CONCLUSIONS

The results of the study are concluded as follows:

This study was an effort in similar way to find out every academic discipline has different nature of research requirement therefore physical education too also demands a separate attention from statistical point of view. Looking to the challenge in solving various problems, vast scope of application of statistics in physical education and sports, demands a development of full-fledged discipline as sports statistics.

REFERENCES

- [1.] **Alger, P. L.**, “The growing importance of Statistical Methods in Industry”. General Electric Rev. Vol. 51 No. 12, 1948
- [2.] **Beveridge, W.I, L.**, “The art of Scientific Investigation. Rev. ed. New York: Random House, 1957
- [3.] **Freud, John G.**, **Elementary Business Statistics**. 6th ed., Englewood Cliffs, NJ, Prentice Hall 1993.
- [4.] **McClave, J. T.** **Statistics for business and Economics**, 6th ed., Englewood Cliffs, NJ, Prentice Hall 1994.