Chapter 20
Research Publications in Anthropometric Measurements of Sports

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ABSTRACT

This chapter deals with the bibliometric study on the publication of "anthropometric measurements." The records are collected from Pubmed resource MEDLINE for the period of 2006 to 2010. The total number of records is 1869. Result of such studies may be very useful for the research administrators, policy makers, and funding agencies. Anthropometry plays an important role in determining athletes' performances and may also help the coaches select athletes for team events. Anthropometric measurements have been a part of physical education since its commencement in this country.

INTRODUCTION: ANTHROPOMETRIC MEASUREMENTS

There are noticeable individual differences in anthropometric and physiological characteristics among apex players. Anthropometric measurements incorporate height, weight, body fat percentage, and waist and hip circumferences. Anthropometric measurement was the first type of testing used in physical education in the world. Fifty separate measurements were recommended by the American Association for the Advancement of Physical Education.

Importance of Anthropometry Measurement in Sports

Anthropometry is the science of measuring the size and proportions of the human body. Anthropometry' means the measurements of man, whether living or dead, and consists primarily in the measurements of the dimensions of the body. The ancient Egyptians also used a push sort of anthropometry during the period from the thirty-fifth to tenth century B.C. The study of 'Body Types' has a significant place in the field of sports. Anthropometric measurement has revealed correlation between body structure physical characteristics and sport capabilities. In all the games, height, weight, and other Anthropometric variables play a vital role in the player's performance. The physical structure, especially the

height and arm length, have definite and decisive advantage in many games. Similarly, segmental length of individual body parts, the arm length specifically, is of considerable advantage in selected events in athletics and in certain games.

NEED FOR THE STUDY

Behrens and Luksch (2006) studied the Inorganic Crystal Structure Database with the focus on growth rate, distribution of publications, productivity of authors, and multiple authorship patterns. Blizzard (2000) tested the validity of a questionnaire to measure frequency of headaches related to the neck. A secondary goal was to test the reliability of field measurement of associated cervical spine anthropometric and muscle performance factors. The anthropometric and muscle performance measurements were reliable, but slight improvements on retest suggest the need for multiple measurements. Carlos M. Gil et al. (2003) explained that the need for accurate anthropometric measurement has been repeatedly stressed; reports on growth and physical measurements in human populations rarely include estimates of measurement error. They described the standardization process and reliability of anthropometric measurements carried out in a pilot study. The results are in agreement with those recommended in the literature. Therefore, these anthropometric measures seem to be adequate to assess body composition in a multicenter survey in adolescents. Kuriyan (2004) found that total body skeletal muscle mass plays a significant role in both health and disease states. Accurate measurement or prediction of muscle mass is useful in physiology, nutrition, and clinical medicine. There are many prediction equations derived in the Western populations to estimate skeletal muscle mass, however, regression equations best fit the population they are derived from. There is hence a need to generate predictive equations for the Indian population. Maria (2000) obtained the dietary intakes of a Greek team of 21 elite football players during the competitive season. Anthropometric measurements were taken for all athletes over three athletic seasons: the transitional (vacation), the training, and the competitive (games) season. The results showed that the mean body weight and the percentage body fat of the athletes decreased from the transitional to the training season. Differences in percentage body fat were found between players according to their position in the game. The offensive players had the lowest percentage body fat (11.4 percent) and the goalkeepers the highest (13.7 percent). Kumar Patra (2007) did HIV/AIDS Research in India and revealed the rapid growth of literature from 1992 onwards. The authorship distribution was examined using Lotka's Law. To identify the core journals, Bradford's Law was used. Relative productivity of India was low and we had to focus more on research and development. Toni (2009) discussed that the medical professionals have recognized eating disorders and related problems in competitive athletes. Auxiliary members (color guard, dance, majorettes) experience the same appearance-related pressures observed in sports commonly associated with eating disorders. Wei Xu (2003) made clear that an economically and scientifically developing country like China did research in the field of Neuroscience. A MEDLINE-based bibliometric analysis was done in the Chinese output in neuroscience was done for the period of 1984 to 2001.

LIMITATIONS

The study is confined to a period of five years from 2006 to 2010 covered in the database MEDLINE only.

METHODS

Medline is one of a large bibliographical database. It covers the journal articles in medicine, dentistry, and health sciences. References in Medline include

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