



Body Compositions Profile of National Archers

Research Paper—Physical Education

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Sports is an activity which has psychological and physiological dimensions. In this modern era the competition, the psychological preparation and fitness of a team is as much important as teaching the different skills of a game on the scientific lines. These teams are prepared not only to play but winning the game. Sports is not only the proficiency in the skill which being victory but more important is the psychological, and physiological fitness of the players. Olympic level sportsmen are of special interest and importance because of there exceptional physiological and mental abilities. Scientific selection of young also sets an aim for achieving that particular level.

High performance in sports activities are the result of many factors such as their physical fitness, skill efficiency, tactical efficiency, Constitutional factors etc. Physical fitness has been defined by the President's council on physical fitness and sports as "the ability to carry out daily tasks efficiently with enough energy left over to enjoy leisure time pursuit and to meet unforeseen emergencies." The position of the American Alliance for health, Physical Education, Recreation, and dance (AAHEPRD) "is that Physical Fitness is a multifaceted continuum extending from birth to death." Affected by physical activity it ranges from optimal abilities in all aspects of life through high and low levels of different physical fitness, to severely limiting disease and dysfunction. Physical Fitness, although related, is not the same as health.

A world- class athlete can be ill, or a person can be in excellent health (Free from disease) but unable to run or swim for more than a few hundred yards. A person's physical fitness level consists of two major aspects; actual and potential. There is a minimal fitness level that must be maintained

to prevent organic deterioration and ensure proper physiological functions. Beyond this "proper" level of fitness depends on the daily demands of life. Today sports activities' changing in rapid manners and sports is now become a sports industry. It is becoming a more competitive and complex in nature, more practice more competitions, with proper and regular workout. Only those able to be withstand the wear and tear of competitive sports can survive in the field of sport. Sport is accepted as a cultural phenomenon, there is constant standard of performance. As results, 21st century sports demand optimum physical fitness and higher degree of performance. Choudhary conducted a study on physiological variables on eighty inter college level judo players with the purpose to sketch the profile of judokas and to compare them in different weight category. The variable selected for the study were, resting heart rate, vital capacity, negative breath holding capacity, positive breath holding capacity, and anaerobic capacity. The prevalent aim of this investigation was to sketch out the body composition profile of National level Archers.

Methodology— Twenty male Archers from Sports Authority of India, WTC, Sub center, Aurangabad and Shrinath Sports Academy, Aurangabad, Maharashtra (India) were taken for the purpose of the study. To access the body composition profile of Archers, the following variables were taken.

A. Body fat percentage. B. Weight. C. Fat free weight. D. Optimal fat weight. E. Optimal body weight. F. Amount over as under weight.

Reliability of test— Test re test method was used to record the reliability of the test.

Result and discussion

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Table no-1

Reliability coefficient of test- retests scores

Sr.no Variables

Coefficient of reliability

1 Thigh skin fold 0.89*

2 Sub scapular skin fold 0.96*

* Significant at 0.01 level of confidence

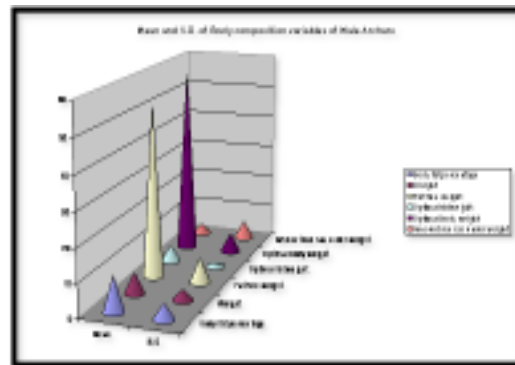
N= 20 r_{0.01} (18) = 0.56

Since very high correlation from 0.189 to 0.96 were obtained investigators competency to administer test as well as reliability of test established in table no-1 shows the competency of investigator to administer the test.

Table no-2 Mean and standard deviation of body composition variables of male Archers

Sr.no	Variables	Mean	S.D.
1	Body fat percentage	10.56	4.80
2	Weight	6.39	3.25
3	Fat free weight	51.60	7.63
4	Optimal fat weight	4.86	0.78
5	Optimal body weight	56.24	5.86
6	Amount over as under weight	2.90	5.39

Table no- 2 and graphically analysis clearly indicates the mean and standard deviation (S.D.) of selected variables which shows that, the mean and (S.D) of body fat was $10.65 \pm (4.80)$, similarly fat weight was $6.39 \pm (3.25)$. Fat free weight was calculated $51.06 \pm (7.63)$. Regarding optimal fat weight of archers it was found $4.86 \pm (0.78)$ so as optimal body weight $56.24 \pm (5.86)$. Regarding amount over as under weight the mean weight was $2.90 \pm (5.93)$.



Conclusion—After the systematic analysis of the data, finally the following conclusions were drawn.

1. Less variability exist amount the subject in relation to optimal fat weight. 2. High variability

exist in relation to percentage of body fat, fat weight, fat free weight, optimal body weight, amount over as under weight. 3. Excess amount of body fat can affect over the performance of Archers.

REFERENCE

- * Burke, J. Edmond and Bush, C. Flarence, Physiological and anthropometric assessment of successful teenager Females distance runners, Research Quarterly 50 (may, 1975) 180. * Costill, david , L. " The Relation ship between selected physiological variables and distance running performance" the Journal of Sports Medicine and Physical Fitness, 7 (June, 1967) 61-65. * Callister et al "physiological characteristics of elite judo athletics" Medicine and Science in sports and exercise 22 (April 1990) 568. * Foster, carl Clinton. "The Relationship of selected physiological training and performance" dissertation abstract international, 37-(Feb. 1977) 4953-A. * Fox Edward L. and Bowers, W. Richard and foss. L. Merie, The Physiological basis of Physical Education and athletics. Dubuque Wm. C. Brown Publishers. 1989. * Harry, Dietrich, Principal of training Berlin, Sports verleg. 1982. * Jacks Biran, Judo, London Pelham Books limited. 1979. * Khanna. G. L. and Jai Prakash. C. S. Exercise Physiology and Sports Medicine, Patiala. NSNIS, Publication. 1990. * O. M. C. A Tumilty et al, " a Physiological profiles of well trained male judo players" Journal of sports science 3 (winter 1986) 64. * Powell, jont T " development of Olympic athletics" Olympic review 19.3 (Nov 1983) 748-750. * Rajeev choudhary " physiological profiles of inter college level judo players" (Un published M. Phil dissertation) L. N. I. P. E. 1995. * Tomson, wade Hoyt et, al " body composition and Physical dimensions of young experienced wrestlers" abstract of research paper. (1981) 116. * Tooshi ali , " effect of three different duration of endurance training on serum cholesterol body composition and other fitness measures" dissertation abstract international 31.9 (Sept. 1970) 4533-4534 A