A COMPARATIVE STUDY ON BODY COMPOSITION, NUTRITIONAL STATUS AND PERFORMANCE CAPACITY OF GROWING BOYS AND GIRLS

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Abstract

Introduction: Present day society has become more concerned about physical fitness and trim athletic figure. Physical fitness depends on routine physical work out on a regular basis. Many youth organizations engage in regular physical work out as part of their schedule. Scouts and Guides movement established in the year 1907 by Sir Robert Baden-Powell, a lieutenant general in the British Army, are one of the pioneer institutions throughout the world.

Objective: The study was conducted to observe the beneficial effect, if any, of organized physical exercise, as undergone by the scouts and guides, on the physical and physiological conditions of young children and compare them with exercise induced and sedentary counter parts.

Study Design: The present study was conducted on 221 volunteers, 138 of them were boys, and the rest 83 were girls. The regular exercising group was taken from Bharat Scouts and Guides, Kanchrapara, whereas, the sedentary boys and girls were also chosen from the same locality. The age range of the study was 13-15 years. The volunteers were divided into 3 (three) major groups – 1) Sedentary Control (without imposing any exercise schedule), 2) Scouts & Guides doing their scheduled work out regularly for last 5 years and 3) Sedentary Experimental Groups (on whom the exercise protocol of Scouts and Guides were imposed). The Sedentary Experimental Group was subjected to the same exercise protocol as that of the Scouts and Guides. The Scouts and Guides were continued to be subjected to the same protocol for the entire study period. This procedure was followed for six months for evaluating the effect of organized regular physical exercise with the unorganised experimental group in comparison to their sedentary counter parts.

Results: Results showed that weight gains for any of the groups are not significant. The weight gain for the group SG is 2.17%, which is statistically non-significant. Same feature has been seen in the cases of Body Surface Area (BSA) (0.75%) and Body Mass Index (BMI) (2.31%). When we consider the physiological parameters, like Haemoglobin (Hb), we can observe a non-significant increase in all the groups. When we compare the cardiovascular parameters of all the groups, we found a very assuring result. In case of some groups the HRmax & Blood Pressure, both were decreased. The control groups, as well as, the Scouts and Guides, had shown an increase in Physical Fitness Index which were non-significant. But when we consider the sedentary experimental groups of boys and girls, we have observed a significant increase in their PFI scores.

Conclusion: This study indicates that the habit of doing regular exercise is much more beneficial to modulate the body composition and physiological parameters in any individual which is not achievable by doing intermittent exercise. Exercise with adequate nutrition helps the growth and development of young boys and girls beneficially. Regular exercise bouts, even of playful type, like the schedule of the Scouts and Guides, help to facilitate growth and development of young individuals of growing age with sufficient nutrition.

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