

EFFECT OF SPECIFIC TRAINING PROGRAM ON SELECTED MOTOR FITNESS  
ANTHROPOMETRIC AND PHYSIOLOGICAL PARAMETERS  
OF YOUNG SWIMMERS

**ABSTRACT**

**Aim:** To investigate the effect of specific training program on selected motor fitness, anthropometric and physiological parameters in young swimmers.

**Methodology:** This one group experimental study was carried out on 15 district level young swimmers ( $15.21 \pm 0.77$  years old) who were selected at Nimpith Vivekananda Sports Association and purposively assigned to experimental (n=15) group. The experimental group trained 2 sessions of dry-land strength-endurance training programme and 5 sessions of swimming training programme per week. Pre-test were conducted for all the subjects (N=15) on selected motor fitness, anthropometric, body composition, physiological & bio-chemical and performance related parameters. After the experimental period of twelve (12) weeks intermediate test and completion of the experimental period of 24 weeks post-test were conducted and score were recorded.

**Results:** After 24 weeks of specific training program muscular strength, muscular strength-endurance, flexibility and leg explosive strength was improved significantly. Weight was significantly decreased and chest circumference was significantly increased but height, shoulder width and arm span were no significantly changes after specific training program. Percentage of body fat and total body fat was significantly decreased and body mass index and lean body mass was no significantly changes after specific training program. All hematological parameters such as, RBC, WBC, PLT, HGB, HCT were significantly decreased after training program. Performance related parameters such as, 100m swimming performance, swim velocity, stroke length and stroke index were significantly improved, but stroke rate was not changed after training program.

**Conclusion:** From the findings of the present analysis, it may be concluded that selected motor fitness, anthropometric and physiological parameters may be altered due to influence of exercise training, depending on the severity and duration of exercise training and which is directly influences of swimming performance.