Review related literature

Phunphen Napradit(2009), The objective of the present study was to determine the relationship between physical fitness and anthropometric characteristics in Royal Thai Army (RTA) personnel. Body weight, height, waist circumference, hip circumference and blood pressure were measured. Body mass index (BMI) and waist-hip ratio (WHR) were calculated. Subsequently, 4,030 males aged 20 to 60 years were field tested using 2-minute push ups sit-ups and 2-kilometer run to measure muscular strength/endurance and cardiorespiratory endurance, respectively. Data were analyzed for the relationships between BMI and anthropometric variables and blood pressure and physical fitness results. The average BMI for RTA personnel was 24.0 + 3.3 kg/m². Correlation coefficient between BMI and waist circumference (r = 0.847, p < 0.001) was better than BMI and WHR (r = 0.553, p < 0.001). Both systolic blood pressure (SBP) and diastolic blood pressure (DBP) had a significant positive correlation with BMI. The numbers of push-ups/sit-ups had a negative correlation with BMI (r = -0.121 and -0.109, respectively), whereas 2-kilometer run times had a positive correlation with BMI (r = 0.291, p < 0.001). In conclusion, RTA personnel with increasing BMI tend to have low physical fitness level.

Physical fitness is defined as an ability to perform physical activity with vigor and alertness. It influences general well-being, health status, military readiness and appearance. The component of health related physical fitness assessment includes cardio respiratory endurance, muscular fitness, musculoskeletal flexibility and body composition. It is well documented that increasing muscular strength, muscular endurance and flexibility is believed to have a positive effect on the cardiovascular system and can reduce musculoskeletal injuries(1-3). Previous studies also revealed that low cardiorespiratory fitness and physical inactivity were directly associated
with cardiovascular disease, type 2 diabetes, obesity and all-cause mortality (4-7). Moreover, anthropometric parameters have been used extensively to predict health risks (8-10). The Royal Thai Army (RTA) uses physical fitness test, which consists of 3 items: maximum number of push-ups, sit-ups completed in 2 minutes and time to complete a 2-kilometer run in order to evaluate muscular strength, muscular endurance and cardiorespiratory endurance of RTA personnel semiannually. The purpose of the RTA physical fitness test is to ensure the maintenance of a base level of physical conditioning essential for RTA personnel, to improve performance efficiency and military appearance and to promote health (11). However, anthropometric measurement for assessing body composition is not recorded at the time of each physical fitness test. A few military studies also have investigated the relation between physical fitness test as a field test and health problem.

Thus, the aim of the present study was to determine the relationship between physical fitness and anthropometric characteristics in RTA personnel, using data collected as part of the Royal Thai Army Physical Fitness Test Survey.

Archana Chahal

Talent identification, selection, training and improvement (TISTI) programs were scanty in team sports especially in consideration of Indian female Basketball. This study tested the hypothesis that predicting excellence in junior Indian female basketball players in relation to anthropometric, physiological variables and then helpful to determine the squads of other levels. The regression and factorial analysis to predict the excellence were applied. The study measured anthropometric measures (height, weight, arm length, palm length, leg length and the girths of the upper arm, wrist, thigh and calf) and physiological variables (anaerobic power, peak flow rate, vital capacity and four skin folds for body fat percentage) of ninety six
female players competing at junior National Basketball championship. To collect the data of
15.
selected variables were taken on each subject individually during rest hours with the help
of standard scientific instruments and techniques. Significant relationships were found
between performance in relation to palm length (0.32), leg length (0.29), upper arm
circumference (0.24), anaerobic power (0.30), peak flow rate (0.69), vital capacity (0.22)
and body fat
percentage (0.37). The performance in junior female basketball players percentage (0.37)