

RELATIONSHIP OF PHYSICAL FITNESS AND PHYSIOLOGICAL VARIABLES OF SPORTSWOMEN

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ABSTRACT

The purpose of the study was to find out the relationship of the selected fitness components and physiological variables of sportswomen. The subjects for the study were twenty five sports women selected from Rajasthan, participated at nationals or inter university level competitions. Total twelve variables i.e. six physiological variables and six motor components were chosen. Physiological variables included body density, vital capacity, blood pressure, breath holding capacity, hemoglobin and Pulse rate. Motor components included Cardio Vascular Endurance, Agility, Flexibility, Speed, Strength and Balance. Body density (percentage of body fat) was calculated from the skin fold measurements recorded at four sites of the body i.e Biceps, Triceps, Sub-scapular and Supra- iliac with the help of skin fold caliper in millimeters. Peak flow rate was measured with the help of peak flow meter in liters. Blood pressure (systolic and diastolic) was measured by Doctor's Sphygmomano-meter in pulse pressure. Hemoglobin Percentage was measured with the help of Hemoglobinometer. Pulse rate (active pulse rate and resting pulse rate) was timed by stopwatch in number of beats per minute and point of checking area was neck. Breath holding capacity was measured with the help of nasal clip and stop watch in seconds. Speed was measured by the performance of 50 m dash in seconds. Agility was measured by 10 x 4 m shuttle run in seconds. Flexibility of lower back and hamstring muscles was measured by the performance of sit and reach test in centimeters. Strength was measured by the performance of standing broad jump with the help of flexible steel tape in meters. Endurance was measured by the performance of 600 m run on standard track with the help of stop watch in seconds/minutes. Balance was measured by the performance of static balance test (stoke stand) in sec/minute. All sports women were provided complete information about the study and instruments which were used. To find out the relationship of selected motor components and physiological variables Pearson Product Moment Correlation was used. Findings indicated that relationships of physiological variables on sports women were significantly related to 10 x 4 m shuttle run and active pulse rate (0.64673), 50 m dash to systolic blood pressure (0.401422) and active pulse rates (0.412861), balance and diastolic blood pressure (0.41757).