

Relationship between Communication Skill and Health Related Physical Fitness Variables of Engineering College Students

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Abstract

The aim of this study was to find out the relationship between communication skill and selected health related physical fitness variables of engineering college students. 250 final year engineering college men students, consisting of all areas of specialization, such as civil, mechanical, computer science, electrical and electronics etc were randomly selected from five engineering colleges in and around Chennai. To determine communication skill was measured using standard questionnaire and health related physical fitness variables such as cardiovascular endurance, muscular endurance, muscular strength, flexibility and percent body fat were measured through standard tests. Thus, data on communication skill and health related physical fitness components of engineering college men students were collected. To test statistical significance of the relationship between Communication Skill with health related physical fitness variables Pearson's Correlation Coefficient was calculated. The obtained Correlation Coefficients proved that there were significant relationship between Communication skill and health related physical fitness variable percent body fat with obtained 'r' value of -0.100 were greater than the required table 'r' value of 0.095 required to be significant at 0.05 level. It was concluded that psychological variable communication skill is significantly related with health related fitness variable percent body fat of engineering college students.

KEYWORDS: Health Related Physical Fitness variables, Muscular Flexibility, Muscular Strength, Muscular Endurance, Cardiovascular Endurance, Percent Body Fat, Communication Skill

Introduction

World Health Organization has set a target that every person in the world should become health conscious by 2000 AD and it is a right step in the attainment of health for all. The International Olympic Committee has signed an agreement with (W.H.O.) for furthering the cause of health for all and sports for all by 2000 AD. This agreement is clearly directed towards attaining total fitness of all individuals by 2000 AD. As the fitness thought grew at the end of the last century, it became clear that several specific components contribute to an individual overall level of fitness. Physical fitness is classified into health related, skill related and physiologic fitness. Health related fitness is related to the aptitude to perform activities of daily living without too much exhaustion and is conducive to a low risk of premature hypokinetic diseases. The health related fitness components are cardio respiratory (aerobic) endurance, muscular strength and endurance, muscular flexibility, and body composition. (Williams, 2006) Humans have always been interested in good life. The physical aspects of the good life have included positive health

(fitness) and the ability to move efficiently in work, play, and locomotion (performance), the ability to move well in numerous situations is one of the important objectives of physical education. Considerable time and effort are spent in attempting to help persons, especially children and youth, learn how to successfully engage in work, play and fundamental type of movement requiring general and specific skills. (AAPHPERD, 1980)

The World Health Organization (Physical fitness is a combination of qualities that enable a person to perform well in vigorous physical activities. These qualities include agility, endurance, flexibility and strength. Physical fitness and good health are not the same, though each influences the other. (The World Book of Encyclopedia) Health related fitness refers to the condition of physical and physiological characteristics that identify the risk levels for the premature development of diseases or morbid conditions presenting a relationship with a sedentary mode of life. (Bourchard and Shepard, 1993). Health related physical fitness is important to everyone and should be stressed by physical educators and medical people alike. Health related fitness is defined as the ability to perform strenuous activity without excessive fatigue showing evidence of traits that limit the risks of developing diseases and disorders which affect a person's functional capacity. Components of health related physical fitness are identified as muscular strength, endurance, flexibility, cardio respiratory endurance and body composition. (Nichols, 1986)

Modern man lives in a mental world in which the important skills of success are based on his psychological activities. Increasing pressures on human mind in the pursuit of materialistic philosophy are making inroads into the happiness of life. Moreover, the twentieth century is a revolt against the traditional practices prevalent in the past. To keep pace with the fast and vast changes that are taking place in the various disciplines, there is a tremendous demand and responsibility cast on the training system to meet the challenges of preparing men and women to achieve tasks with success and excellence. (Mohan et.al. 1986).

Communication is the activity of conveying information through the exchange of ideas, feelings, intentions, attitudes, expectations, perceptions or commands, as by speech, gestures, writings, behaviour and possibly by other means such as electromagnetic, chemical or physical phenomena. It is the meaningful exchange of information between two or more participants (machines, organisms or their parts). (Ayesha Majid 2015)

For engineering college students many elements that affect the participation of the students in the physical activities like; environment, extracurricular activities, family environment, parents' education, community, spirit, schedule of physical education and classroom activities, which resulted in lack of physical fitness and mental health. Being physically active has beneficial influences on psychological health. Regular physical activity in adolescence is particularly important because it helps to build and maintain healthy bones, muscles and joints. Researches indicate that higher physical fitness is generally increasing the confident level in their life style.

The engineering college students who are expected to meet the demand pattern for skills of different kinds has changed in all sectors, in general and manufacturing sector, in

particular our country, must have adequate health fitness and mental fitness to cope with their academic performances. For making any suggestions to improve the present levels of health related physical fitness and psychological levels of engineering colleges students, a survey at present is imperative, hence, in this research, an attempt was made to find the relationship between communication skill and selected health related physical fitness variables of engineering college students.

METHODOLOGY

The subjects were 250 engineering college men students, consisting of all areas of specialization, such as mechanical, computer science, electrical and electronics etc were randomly selected from five engineering colleges in and around Chennai. To determine health related physical fitness variables such as cardiovascular endurance, muscular endurance, muscular strength, flexibility and body composition were measured through standard tests and Communication Skill was measured using standard questionnaire. Thus, data on health related physical fitness components and Communication Skill of engineering college men students were collected. To test statistical significance of the relationship between health related physical fitness variables with Communication Skill Pearson's Correlation Coefficient was calculated. In all cases 0.05 level was fixed to test the hypothesis of this study.

RESULTS

Tab I: Showing Descriptive Statistics of Engineering College Men Students on Health Related Physical Fitness Variables and Communication Skill

	Health Related Physical Fitness Variables					Communication Skill
	MF	MS	ME	CVE	PBF	
N	250	250	250	250	250	250
Average	4.46	21.91	26.26	2409.96	23.75	21.65
Std Deviation	1.54	3.44	2.81	264.65	3.10	4.42
Minimum	2	16	20	1720	19.24	10
Maximum	11	31	34	2850	31.5	29

MF: Muscular Flexibility; MS: Muscular Strength; ME: Muscular Endurance; CVE: Cardiovascular Endurance; PBF: Percent Body Fat.

Tab II: Relationship between Selected Health Related Physical Fitness variables with communication skill of Engineering College Students;

S.No.	Variables	Correlation Coefficient	Level of Sig.
	Communication Skill Vs		
1	Flexibility	-0.005	NS
2	Muscular Strength	-0.049	NS
3	Muscular Endurance	0.049	NS
4	Cardiovascular Endurance	0.007	NS
5	Percent Body Fat	-0.100*	<0.05

Required table r value $(1,249)_{0.05} = 0.095$

* Significant at 0.05 level.

DISCUSSIONS

The results presented in Table I showed that the engineering college students health related physical fitness variable muscular flexibility ranges minimum 2.00 centimeters to maximum of 11.00 centimeters with average 4.46 and standard deviation +1.54, muscular strength minimum 16.00 and maximum 31.00 with an average of 21.91 and standard deviation of +3.44, muscular endurance minimum 20.00 and maximum of 34.00 with an average of 26.26 and standard deviation +2.81, cardiovascular endurance minimum 1720.00, maximum 2850.00 with average 2409.96 and standard deviation +264.65, percent body fat minimum 19.24, maximum 31.50 with average 23.75 and standard deviation +3.10.

The results presented in Table II showed that the engineering college students psychological profiles leadership skill ranges minimum 10.00 to maximum of 35.00 with average 22.16 and standard deviation + 5.30, communication skill minimum 10.00 and maximum 29.00 with an average of 21.65 and standard deviation of + 4.42, self-confidence minimum 15.00 and maximum of 32.00 with an average of 22.22 and standard deviation + 4.46, interpersonal relationship minimum 15.00, maximum 34.00 with average 23.58 and standard deviation + 4.57, stress management minimum 18.00, maximum 48.00 with average 34.30 and standard deviation + 7.31. The engineering college students psychological profiles communication skill minimum 10.00 and maximum 29.00 with an average of 21.65 and standard deviation of + 4.42.

The obtained Correlation Coefficients shown in Table II proved that there were significant relationship between Communication skill and health related physical fitness variable percent body fat with obtained 'r' value of -0.100 were greater than the required table 'r' value of 0.095 required to be significant at 0.05 level.

Yi-Ching Huang and Malina (2002) studied on the relationship between physical activity and health-related physical fitness. Physical activity is significantly and

positively correlated with one-mile run performance, muscular endurance. Ahmed A (1999) determined whether there is a corresponding relationship between another component of achievement, physical fitness, and self concepts and whether this relationship, if any is stronger for actual fitness Correlation for estimation of ability in physical education activities and total self concept scores were significant and appears to be a positive correlation between physical fitness and estimation of fitness for boys. The findings of this study were in agreement with the previous researches.

CONCLUSIONS

It was concluded that psychological variable communication skill is significantly related with health related fitness variable percent body fat of engineering college students.

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- health promotion (Corbin et al., 2011). Fitness knowledge is often taught in Kindergarten through encyclopedia 12th grade (K-12) PE in the US (Corbin et al., 2011), where it is deemed as essential learning content (Cale et al., 2007)