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Fitness profile of CIT University freshmen students

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Abstract
The purpose of the study was to create a fitness profile using tests that cover health-related fitness components to 1st Year CIT students enrolled in PE 101 (Foundation of Physical Fitness) during the 2nd Semester 2008-2009 as well as to see fitness' differences or similarities between sexes. Age, height and weight measurements were taken alongside results from five health-related fitness component tests: One Mile Walk Test (Cardiorespiratory Endurance), Push-Up and Curl-Up (Muscular Strength and Muscular Endurance), Sit and Reach Wall Test (Flexibility), and Body Mass Index (BMI) (Body Composition). A total of 129 Service PE students participated with a mean age of 18.17. Forty-nine students were female with a mean age of 17.98 while 80 were male students with a mean age of 18.29. Combined mean weight for all subjects was 53.10 kg, but the mean weight for the females was lesser at 48.9 kg and higher for the males at 55.8 kg. The same holds true for the height of the subjects where the combined mean height is 1.59 meters, where the mean height for the females is shorter at 1.51 meters, while the males had a taller mean height of 1.65 meters. For fitness test scores, apparent results were seen in tests such as the Push-Up and Curl-Up Tests where males performed at higher repetitions compared to females. For the flexibility test, both sexes performed almost getting the same result. BMI and results for the One Mile Walk Test were also within the acceptable range or level for both sexes. Since the study is basically profiling in nature, only the means were taken and were presented using tables and a figure.

Keywords: physical fitness, health-related fitness tests, cardiorespiratory endurance, muscular strength, muscular endurance, flexibility, body composition.

1. Introduction
Knowledge in health-related physical fitness components is a substantial component of a Physical Education program in school settings. More than the benefits that it can give to teachers and parents, students are the direct benefactors of a carefully designed and well-thought of fitness program.

Awareness in health-related fitness components, being part of various physical activities such as games or sports, begins in the primary level. Physical educators define terms such as Cardiorespiratory Endurance, Muscular Strength, Muscular Endurance, Flexibility and Body Composition as these are performed by the students during Physical Fitness Testing days. Knowledge of these is strengthened as the students progress to the secondary level where they continue to learn the relationships that exist among these components in the pursuit to pay more attention to their physical health. At the tertiary level where knowledge is presumed to have been acquired during the primary and secondary levels, students are taught how to apply such learning, with the hope that concepts are inculcated and appreciated, and therefore would enable the students to reach the final objective of valuing an active lifestyle through the use of an individualized physical fitness program that would hopefully lasts a lifetime.

Numerous health-related benefits can be found in books, studies and researches locally and globally. These are indeed hard proofs that fitness plays a vital role in improving the quality of an individual's life. However, to determine how and when to start the improvement or maintenance of the fitness level of a student or an individual, it is best to first create a health-related fitness profile that will show the current fitness level of the students. This will be considered as the entry point from which a student will know how to maintain or improve his/her fitness level and hopefully achieve maximum quality of life in the succeeding years.

1.1 Purpose of the Study
The objectives of this study therefore were to create a general fitness profile of 1st year CIT Freshmen Students enrolled in PE 101 (Foundation of Physical Fitness) during the 2nd Semester AY 2008-2009 and compare between sexes their fitness levels using health-related fitness parameters.

2. Methodology

A total of 129 male and female students from 16 – 26 years old who were freshmen or new students (transferees or shiftees) during the 2nd Semester AY 2008-2009 participated in this study. Height and weight measurements of the subjects were taken through the use of a Detecto eye-level physician scale.

In getting the Health-Related Physical Fitness level of the subjects, the following physical fitness tests were employed: One-minute Push-Up, Curl-Up, Sit and Reach Wall Test, Body Mass Index, and One mile Walk Test.

3. Results and Discussion

Between sexes, it is quite evident that for the anthropometric measurements, CIT male students were generally heavier with a mean weight of 55.8 kg, and much taller with a mean height of 1.65 meters as compared with the female students' mean weight of 48.10 kg and mean height of 1.51 meters as seen in Table 1.

Table 1: Means of Anthropometric Measurements

1st Year Students	Mean	
	Weight (kg)	Height (cm)
Male	55.8	1.65
Female	48.1	1.51

As for fitness test scores which are presented in Table 2, males performed better except for the BMI in which both results are within the acceptable range. The results of the Sit and Reach Wall Test may seem to present almost the same for both male and female freshmen students with only .03 difference, which is negligible considering that numbers 1, 2 and 3 were just used to represent the students performance. Essentially, with mean scores of 1.66 for males and 1.63 for females, both sexes could only reach the wall using their fingertips up to their knuckles.

Table 2: Means of Fitness Tests

1st Year Students	Mean				
	1 minute Push-up (repetitions)	Curl-up (repetitions)	Sit and Reach Wall Test (meter)	BMI (kg/m^2)	1 Mile Walk (minutes)
Male	18.31	32.94	1.66	20.73	14.84
Female	13.81	20.14	1.36	21.72	16.19
Combined mean	16.60	28.40	1.65	21.10	15.35

The result for the one-minute Push-Up Test, which showed a better result for the males, was somehow predictive given that "males have greater absolute strength than females because of greater muscle mass … and are slightly stronger in upper-body strength". Though the most apparent difference between sexes of this group is the result of the Curl-Up Test as seen in Figure 1, it should be noted that expected performance is different for males and females.

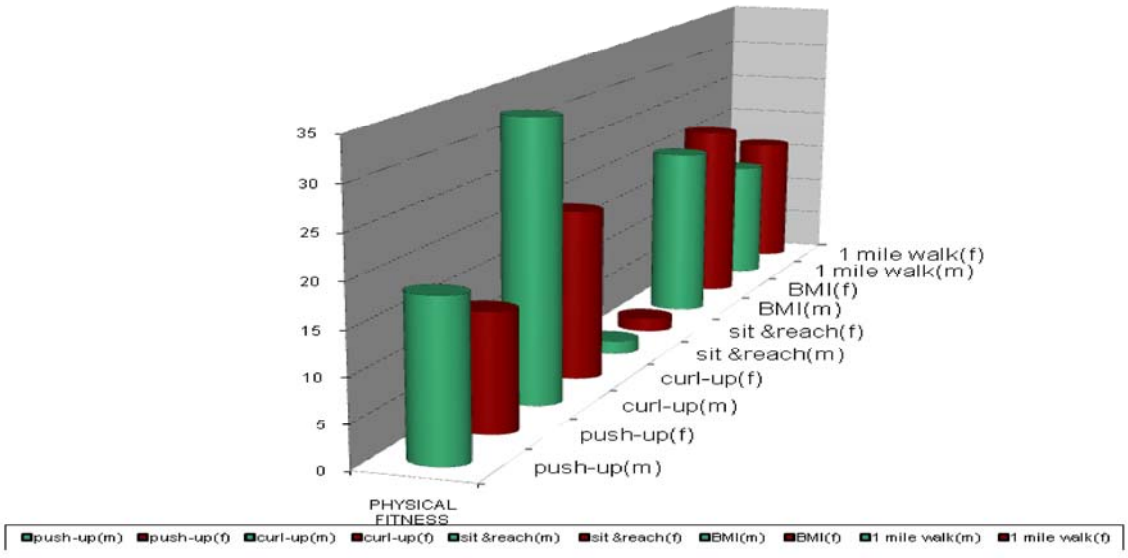

Fig 1: Fitness Test Scores

4. Conclusion

A bird's eye view on the above fitness results of the 1st year students showed that in general, fitness level of students at this particular age group, even when compared with students or population of other groups of people, is basically the same and within the average level. Results also showed that for most tests, especially those that involve physical skills, males present better results or advantage and this is because of physiological differences that are apparently inherent.

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