

## Analysis of Physical Fitness Performance of Freshmen Students of Bulacan State University

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### Abstract:

*Physical education today has the potential of contributing to the enhancement of positive lifestyle which ultimately lead to a better quality of life. People can achieve total fitness which will enable him to avoid common illness, use leisure wisely , practice safety from harm , and overcome life`s stresses. Physical fitness, otherwise known as “physical vitality” is one of the self testing activity in Physical Education. In the total fitness efforts, the school must not stand alone, there ought to be more coordination between the academe, community, and civic minded citizens in order to carry forward a resourceful and imaginative program for physical fitness, a program that will challenge the imagination of our youth, calling on their maximum abilities, enlisting their utmost energies. With these concepts as backdrop, this research aims to take a look at the physical fitness level and their performance of the freshmen students of Bulacan State University.*

*Documentary analysis was used in collecting the results of the physical fitness tests in all students taking the physical fitness were evaluated. Physical fitness test is one of the recommended means of achieving the objectives of the PE program in particular. It was found out that the performance of the male respondents has a significant difference in six (6) areas of physical fitness. While in one (1) area that is 1 kilometer run and walk there’s no significantly difference in the performance of the male and female freshmen students. This implies*

*that the gender, facilities and equipment in physical education has a great effect on the quality of students' performance.*

**Key words:** Education, Physical Fitness, Descriptive Research, City of Malolos, Bulacan, Philippines

### **Background of the Study:**

Physical education today has the potential of contributing to the enhancement of positive lifestyle which ultimately lead to a better quality of life. People can achieve total fitness which will enable him to avoid common illness, use leisure wisely, practice safety from harm, and overcome life's stresses. Ultimately, physical education can contribute towards a relatively long and happy life.

Physical fitness, otherwise known as "physical vitality" is one of the self testing activity in Physical Education. Through physical education, all Filipino youths are expected to develop some degree of physical well being. Though not all youths are expected to become successful athletes in the future, they need to be physically fit so that they can perform their daily tasks efficiently.

In the total fitness efforts, the school must not stand alone, there ought to be more coordination between the academe, community, and civic minded citizens in order to carry forward a resourceful and imaginative program for physical fitness, a program that will challenge the imagination of our youth, calling on their maximum abilities, enlisting their utmost energies. Only in doing so will we be able to generate the energy and strength to established the foundation of the Philippines 2000. With these concepts as backdrop, this research aims to take a look at the physical fitness level and their performance of the freshmen students of Bulacan State University who are taking up Physical Fitness as their Physical Education class second semester of school year 2013-2014.

## **Statement of the problem:**

The major problem of this study is: What is the physical fitness performance level of the freshmen students of Bulacan State University during the second semester of school year 2013-2014?

Specially, the study attempted to answer the following questions:

1. What is the physical fitness performance of freshmen students of Bulacan State University with respect to the following:
  - a. 50 meters sprint
  - b. Standing long jump
  - c. Push up
  - d. Shuttle run
  - e. Curls up
  - f. Sit and Reach
  - g. One(1) kilometer run and walk
2. Is there a significant difference between the physical fitness level of college freshmen students , when they were grouped according to age and sex?
3. What strategies may be developed in improving the Physical Education Program and student performance?

## **Significance of the Study**

This study is expected to make the administrators, dean, physical education teachers, and students aware of the need to stress physical fitness as one of the trust of physical education today. Through comparison of the data gathered: the students along with these areas can acquaint themselves with the proper mechanics of attaining physical fitness.

Consequently, this study may serve as a basis for the interpretation of individual and group performance of Bulacan State University freshman students. The result of this study

will serve as the standard norm of physical fitness of the BulSU. The physical fitness data may serve as basis for developing a strategy on the physical education program.

To the administrators and deans, proper planning and supervision can be derived from the data of the present study as a baseline for including fitness activities in the actions programs of the university for teachers, personnel and students.

To the teachers, considering that the period of adjustment from secondary to tertiary/college and rapid increase in their height and weight, the results of this study may help them plan physical education activities to enhance and stimulate growth to the fullest.

The students who are the direct beneficiaries of the physical fitness program, may be given enough interest and enthusiasm to beat their own records they perform in the first trial and obtain the fullest performance of the students.

### **Scope and Delimitation of the Study**

This study focused on the freshman students who are taking up Physical Fitness as their Physical Education class. It analyzed the physical fitness performance level of the freshman students of Bulacan State University.

The respondents of this study were the freshman students of Bulacan State University male and female who are taking up physical fitness as their Physical Education Class during the second semester of school year 2013-2014. All seven (7) items of the International Committee on the standardization of Physical Fitness Test (ICSPFT) performance battery test were used in the testing. The subjects were selected by random sampling. The study was conducted during the second semester of the school year 2013-2014.

## **Relevant Theories**

Physical fitness is a personal matter and must be viewed within the context of an individual's daily life activities. People are different from one another. They differ in age ,sex, body, as well as in their occupation and lifestyle. What is common to all of us is the responsibility to improve and maintain our physical fitness level.

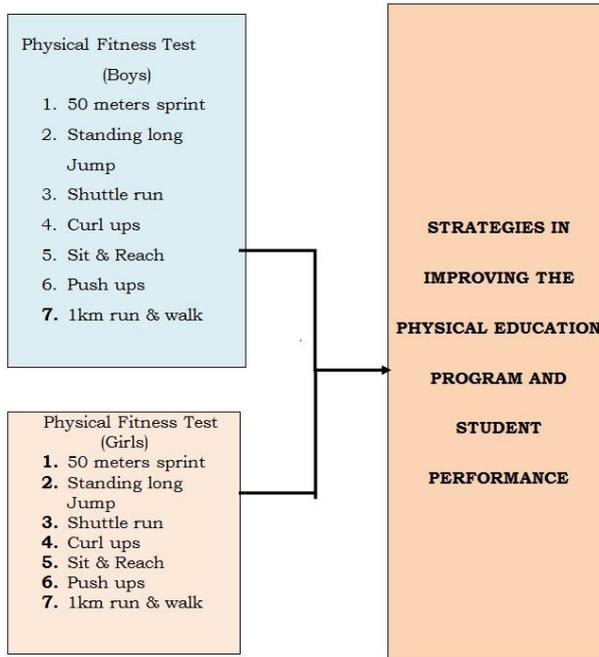
Previous training and regular exercises are factors that contribute to performance on physical fitness. This is one reason why more and more University and colleges are including physical fitness in their curriculum as a means to improve their program because they introduce to the students to the importance of the regular exercises, adequate rest and recreation, proper nutrition, appropriate medical care. (Johnson and Nelson: 1999)

## **Conceptual Model**

The theoretical model that guided the conduct of this study took into consideration a comparison between the actual performance of the First year students who are taking up physical fitness as their Physical Education class.

A profound interest in this study are the gaps between the “What Is” and “What ought”, since these were supposed to be students who would be performing below and above their performance. Thus the next focus was “What the?”. The identification of these gaps may be useful as basis in evolving strategies for improving Student performance.

The conceptual performance model of the study is presented in the paradigm shown in Figure 1



**Figure 1. Conceptual Paradigm of the study**

### **Hypothesis of the Study:**

The following were the null hypothesis of the study:

1. There is no significant difference between the performance of the male and female freshmen students of Bulacan State University in the physical fitness test in terms of:
  - 1.1 50 meters sprint
  - 1.2 Standing long Jump
  - 1.3 Shuttle run
  - 1.4 Curl ups
  - 1.5 Sit & Reach
  - 1.6 Push ups
  - 1.7 1km run & walk

2. There is no significant difference between the performance of male and female freshmen students of same age in Bulacan State university in the Physical fitness test in terms of :
  - 2.1 50 meters sprint
  - 2.2 Standing long Jump
  - 2.3 Shuttle run
  - 2.4 Curl ups
  - 2.5 Sit & Reach
  - 2.6 Push ups
  - 2.7 1 km run & walk

## **Methodology**

In this research is utilized the descriptive method. According to Van Dalen, this method is basically a technique of quantitative description of the general information and answer questions on the prevailing conditions by analyzing the data gathered. Based on statistical treatment, much of the significance of this method in education lies not only in fact-finding of the status of exiting phenomena, providing descriptions cross section at specified period of time and place, but also predicting and identifying relationship among and between variables in order to find out solutions to scholarly problems and to make directions of change noted and evaluated, and for future development.

Documentary analysis was also used since the records of the results of the physical fitness tests in all freshmen students taking the physical fitness were evaluated.

## **Population and Sample**

A total of 150 male and 150 female freshmen college students were picked from different colleges of Bulacan State University through random sampling. This was made possible by selecting the age group of the students of 16, 17, and 18 male, female

from the freshmen college students. The researcher counted 10 % of the male and female from the list, picking out one from every ten students. A total of 300 freshmen college students from both sex and age were taken.

**TABLE 1**  
**Population and Sample**

AGE	SEX		TOTAL
	MALE	FEMALE	
16	50	50	100
17	50	50	100
18	50	50	100
<b>TOTAL</b>	<b>150</b>	<b>150</b>	<b>300</b>

### **The Instrument**

The researcher utilized the Standardized Physical Fitness Test. This instrument consisted of seven (7) items designed to measure the components of physical fitness level of the students.

#### ***Test Items***

1. 50 meter sprint
2. Standing Long Jump
3. Push Ups
4. Shuttle Run
5. Curl-Ups
6. Sit and Reach
7. 1 kilometer Run and Walk

#### ***Components measured***

- Speed  
Leg Power  
Arm strength  
Agility  
Abdominal Strength  
Flexibility  
Cardio-vascular Endurance

The Physical fitness test incorporates improvement of previously used physical fitness batteries and makes use of the metric system. These are some of the reasons why it was adopted in the physical fitness program of the University. In 1972 over 10,000 school children from ten (10) school division both boys and girls were tested, on the initiatives of the Department of education, Culture and Sports in Cooperation with the Philippine Amateur Athletic federation and the United

States Peace Corps. The data obtained provided the sample from which the National Norms for the different items in the ICSPFT test battery were developed.

The actual testing on the seven (7) aspects of the physical fitness tests on male and female college freshmen students was done by the PE Instructors who handled Physical Fitness this first semester school year 2013-2014. The data obtained through the permission of the PE instructors that conducted the Physical Fitness tests.

### **Presentation, Analysis and Interpretation of Data**

The need for a physical fitness test appropriate for use internationally has been recognized since the middle of the 1950's when several countries all over the world attempted to determine the physical fitness status of their youth. The standardization of testing procedures and thus comparison of the test results were problems that had to be faced.

The researcher conducted the evaluation of the performance of the freshmen students on the seven (7) items of the physical fitness test.

As could be seen in the Table 2, the results manifested that the freshmen male students had an edge over the female freshmen students in all of the seven (7) physical fitness activities which indicated that in terms of physical prowess, the male freshmen students out performed the female freshmen students which can be attributed to an observable fact that most female students tire easily or they are not enthusiastic about the activity which is a common attitude.

**Table 2**  
**Performance in Physical Fitness Test of College Freshmen Male and Female Students**

<b>Physical Fitness Test</b>	<b>MALE</b>	<b>FEMALE</b>
1.50 meter sprint	7.74	10.11
2. Shuttle Run	10.72	12.91
3. Curl Ups	34.63	18.13

4.Standing Long Jump	171.94	138.44
5.Push ups	27.52	24.73
6.Sit and Reach	57.59	60.47
7.1km Run and walk	8.39	16.66

The mean performance of the male freshmen students surpasses the mean performance of the female freshmen students of Bulacan State University in all seven (7) physical fitness test activities. The reason behind the difference between the two may lie in the fact that the muscle strength of the male is continuously increasing, while female become more concerned with their personal feminine activities rather than those activities as vigorous and rough games.

### **Comparisons of the Respondents Age obtained from the different items**

Age Norms are obtained by giving a test for the freshmen college students of different age group levels and then computing the means of the scores obtained in each age group.

**Table 3. Shows the mean comparison of physical fitness of freshmen students according to age.**

Physical Fitness Test	AGE		
	16 years old Mean	17 years old Mean	18 years old Mean
1.50 meter sprint	8.87	8.85	9.04
2. Shuttle Run	11.55	11.77	12.13
3. Curl Ups	27.6	26.80	25.58
4.Standing Long Jump	163.63	151.15	150.79
5.Push ups	25.82	27.23	25.33
6.Sit and Reach	60.92	58.04	58.10
7.1km Run and walk	6.76	17.88	12.92

Referring to the table, the results indicate that the scores recorded by the respondents 16 years old surpass the performance of the 17 and 18 years old college students in five(5) physical fitness activities namely: shuttle run, curl ups,

standing long jump, sit and reach and 1 km run and walk while in 50 meters sprint and push ups the 17 years old perform well in the two(2) activities. The performance of the 16 years old students may be attributed to their physiological and attitudes and behaviors towards physical activities.

### **Comparison of Male and Female Performance in Physical Fitness Test**

As shown in table 4 that in seven (7) Physical Fitness test four (4) of the test has an highly significant difference based on the t-value scores of the male freshmen students against their female counterpart. The Physical Fitness test scores revealed that the male made an higher scores in the following: 50 meter sprint , shuttle run , curl ups and standing long jump.

In the other activities of the Physical Fitness test like the push ups and sit and reach there are significant difference in the performance of male and female while in the 1kilometer run and walk they were both established an interpretation of score that there is no significant difference in the performance of the male and female.

**Table 4. Comparison of Male and Female Performance in Physical Fitness test**

<b>Physical Fitness Test</b>	<b>t-value</b>	<b>Interpretation</b>
50 meter sprint	19.01	Highly Significant
Shuttle Run	18.61	Highly Significant
Curl Ups	15.45	Highly Significant
Standing Long Jump	5.58	Highly Significant
Push ups	2.401	Significant
Sit and Reach	2.37	Significant
1km Run and walk	1.345	Not Significant

### **Summary and Recommendations**

This study aimed to find out the Physical fitness performance of the freshmen students of Bulacan State University. This study utilized 300 freshmen students boys and girls of BulSU. The

study was undertaken during the second semester of school year 2013-2014. The data were obtained through the use of a standardized Physical Fitness Tests. This instrument consisted of seven (7) activities designed to measure the different components of physical fitness.

#### **A. Performance of freshmen students of Bulacan State University the physical fitness test.**

In all of the seven (7) activities of the physical fitness battery test, the male freshmen students surpassed all the mean performance of the female freshmen students. Therefore, the freshmen male excelled in most of the items in the Physical Fitness test as compared to the performance of the female group. It was gleaned from the result that the probable cause of the findings is the inherent difference in physiology and interest.

#### **B. Are there significant difference between the physical fitness of male and female freshmen students in each activities.**

The male freshmen students performed significantly different in six (6) physical fitness activities, namely 50 meter sprint, shuttle run, curl ups, standing long jump, push ups and sit and reach. While in 1 kilometer run and walk there's no significantly difference in the performance of the male and female freshmen students.

#### **C. What are the implications of these findings for the changes in policies and practice in the physical fitness program?**

One of the objectives of education is to promote total youth and sports development. To be globally competitive entails more

than just good academic, but the creation of citizens who are physically suited to face the unstoppable momentum of change. Physical fitness testing is one recommended means of achieving the objectives of the physical education program in particular.

It was found out that the performance of the male respondents has a significant difference in six (6) areas of physical fitness. While in one (1) area that is 1 kilometer run and walk there's no significantly difference in the performance of the male and female freshmen students. This implies that instruction wise , the teachers are qualified, competent and possess the necessary skills to do the task, but even a teacher who has all the positive qualities will not be able to do anything worth while with what he possess if they lack the facilities and equipment. The facilities and equipment in physical education has a great effect on the quality of students performance.

In this connection, old policies and practices must be changed and these changes entails new methods, through training, seminars, continuous study, and equipment for the benefit of the academe and its clientele.

## **Recommendations**

Based on the findings of this study, the following recommendations are hereby offered:

1. In order to utilize the physical fitness test to discover potentialities, it is recommended that in-service training in physical education as well as on the proper administration of the test be conducted among the physical education teachers so they would be able to maximize their abilities.
2. Physical education teacher should include in their physical education classes supplemental exercises and activities that can improve all the components of physical fitness.

3. Physical activities for the male students there's should be different from that of the female upon knowing the needs of the students.
4. Physical education facilities and equipment be provided by the university.
5. This study can be a basis for the formulation of university norm and basis for better and appropriate course of study for physical education classes.
6. The physical fitness test should be properly administered and should be given twice from the start and before the end of the semester to determine the progress of the students performance in the said activities.

## **REFERENCES**

### ***A. Books***

- Andin, Carmen T (1988). "Teaching Physical Education in High School" Manila: Rex Bookstore Co.
- Belmonte, Paz Cielo, et al (1977), "Physical Education Handbook" Manila: Rex Bookstore Co.
- Hurlock, E.B. (1982), "Developmental Psychology: A Life Span Approach" New York: McGraw Hill Book C.
- Rivera, Aquilino R. (1986) "Physical Fitness in Todays Schools" Navotas Press, Navotas, Metro Manila.
- Roscoe, N.M. and R.W. Heath (1968) "Basic Statistical Methods" New York: Harper and Row Publishers, Inc.
- Siegel, S (1976), "Non Parametric Strategies for the Behavioral Sciences", (McGrow Hill Book Company, Inc.

### ***B. Journals***

- ICSPFT, "Physical Fitness Test Manual", Manila, 1994
- DepEd "Revised Physical Fitness Test Manual "ULTRA Pasig, Metro Manila, 2010

***C. Unpublished Materials***

- Acerro, Pedro A (1985). "The performance of intermediate Grades Pupils in the Physical Fitness Test in Northwest Butuan District, Division of Butuan City and the National Norm A Comparative analysis (Unpublished Master's Thesis Agusan College, Agusan.
- Balonda, Beatriz A.(1986), "The performance Level of Grade IV Pupils in Physical Fitness and the status of the school fitness physical testing program of Antequera, Bohol, 1985 - 86. (Unpublished Master's Thesis University of Bohol, Bohol City.
- Tullao, Marvin R, (1997), "An Evaluation of Physical Fitness of Public High School Students in the Division of Bulacan". (Unpublished Master's Thesis, Bulacan State University, Malolos.