

**AN ASSESSMENT OF THE ANNUAL PHYSICAL AND  
LABORATORY EXAMINATIONS CONDUCTED  
FOR STUDENTS, FACULTY AND STAFF OF  
CENTRAL PHILIPPINE UNIVERSITY**

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**ABSTRACT**

This study was conducted to assess the annual physical and laboratory examinations conducted for students, faculty and staff of Central Philippine University in SY 2004-2005. Descriptive research design was used and an analysis of the responses from 293 respondents in a one-shot survey was carried out by the use of frequency and percentages. The findings of this study showed that the students, faculty and staff perceived that the physical examination conducted for them was comprehensive, while the laboratory examination for students, faculty and staff was perceived to be not comprehensive. The faculty, staff and students want laboratory examinations to be included in the annual physical examinations. The students want the additional cost of laboratory examination to be shouldered by the University while the faculty and staff are willing to pay for additional laboratory examinations.

## INTRODUCTION

### *Background of the Study*

Physical Examination is designed to determine the physical fitness of a person entering a new job, school or college or country. Some institutions like insurance companies require their clients to be medically examined by a qualified doctor to determine any pre-existing diseases or conditions. Higher Institutions of learning also require freshmen to be medically examined to determine their suitability for extra-curricular activities or find out medical history that could be a "liability" to such institution.

In an interview with the Coordinator of the Health Clinic at Central Philippine University, it was emphasized that physical examination is different from medical examination. The difference between the two examinations is that the former is routine examination while the latter involves interpretation of the laboratory examination result. Another school of thought (Potter & Weilitz, 2003) calls this Health Assessment the process of gathering, verifying, analyzing and communicating data about a client. The purpose of the initial assessment is to establish a database about the client's level of wellness, health practices, past illnesses, related experiences, and health care goals. The database is derived from a health history, physical examination, and laboratory and diagnostic test results. The information contained in the database is the basis for a client's individualized plan of care (Mosbys, 1994).

Some faculty and students maybe carriers of several and various illnesses or diseases that need proper diagnosis and monitoring because the spread of such illnesses or diseases can affect the people in the campus. Any illness or disease can be diagnosed through proper laboratory examinations.

The annual physical examination at CPU is neither diagnostic nor preventive. For example, physical examination is done by taking the blood pressure, height and weight, determining eye defects, examining the chest and the back, and a little family medical history.

The University of the Philippines System (UP) (from [www.up.edu.ph](http://www.up.edu.ph)), University of St. La Salle (from <http://www.hsc.dlsu.edu.ph/campusandcommunity/directory.htm>), and University of Sto. Tomas (from <http://www.ust.edu.ph/sitelinks/insideust/departments/admindeptsdetail.asp?Id=health>), require a diagnostic medical examination from the students before admission into any course. Asymptomatic (TB) could be detected early by means of X-Ray. Far more dangerous is direct contact with a person who has the disease (Shryock, 1990). The gap between the existing physical examination practices and the desired

one is very wide that calls for an empirical study to determine the examination for the faculty, staff and students of the University, hence this proposal.

### *Objectives of the Study*

The general objective of the study was to assess the annual physical and laboratory examinations conducted for the students, faculty and staff of Central Philippine University.

Specifically, the study aimed to:

1. Determine the type of physical and laboratory examinations conducted to students, faculty and staff members;
2. Determine how comprehensive are the physical examinations conducted as perceived by the students, faculty and Staff;
3. Determine what are the additional laboratory examinations prescribed by the physician after the physical examinations; and,
4. Determine the willingness of the students, faculty and staff members to pay if there are additional laboratory examinations that will not be paid for by the University.

### *Significance of the Study*

The result of this study will serve as an eye opener to the administration, faculty, and students on the need to have a comprehensive health care system in the University.

The findings of this study could open a new health delivery system, where those students, faculty and staff members with health problems will be regularly monitored, while those with clean health conditions might choose to undergo physical examinations every two years. If this will happen, The University Administration saves on cost of medicine and the students with clean health may not be required to pay annual medical fees.

Through the implementation of the recommendations of the study's findings, awareness from the Administration, Faculty Members and the students could be generated as to type and kind of illness and diseases common among the faculty, staff and students of this University.

### *Scope and Limitation of the Study*

This study was concerned with determining the comprehensiveness of annual physical examination of CPU college students, faculty and staff members who do not belong to any health insurance scheme. The study involved 263 students who were enrolled during the second semester 2004-2005 in seven colleges (Agriculture, Arts & Sciences, Commerce, Education, Engineering, Nursing and theology) and 30 faculty and staff who are not members of any health insurance plan.

## **METHODOLOGY**

### *Research Design*

This is a descriptive research and have utilized the one-shot survey design. Descriptive research describes phenomena or characteristics associated with a subject population (the who, what, when, where and how of a topic). It estimates the proportions of a population that have these characteristics (Cooper & Schindler, 2001).

### *Respondents and Sampling Method*

There were 263 students and 30 faculty and staff members who served as respondents of this study. Cluster sampling procedure was used to select the student respondents while purposive sampling method was used for the faculty and staff. Sample size for participating colleges was derived by proportionate computation.

Student-respondents from bigger colleges like Nursing and Commerce were drawn from two or three class sections as pre-determined by the researcher based on the class schedules obtained from the University Computer Service Center. The class sections were morning, afternoon and late afternoon. All the students with odd number in a row of five students were included as respondents. This process was repeated for all the colleges until the desired sample size for the college was reached. Respondents were drawn from a single section among colleges with smaller sample size.

The faculty and staff respondents were purposively selected. This was a total enumeration of faculty and staff who are not member of any health insurance scheme, but used CPU medical laboratory and have their physical examination at the CPU College of Medicine.

### *Data Collection*

The instrument used for data collection was a researcher made questionnaire, which was subjected to face and content validation by researchers from the College of Nursing. The same instrument was pre-tested among non-participants in the survey. This was to determine the internal consistency of the instrument. The instrument was considered consistent in measuring what was intended to be measured by the researcher.

A letter of permission duly approved by the University President and University Research Center (URC) Director was delivered to the faculty handling classes of the respondents. For example, the College of Commerce has 48 respondents. This was distributed among two sections; one in the morning and another one in the afternoon. The questionnaire was randomly distributed to male and female students. In order not to totally disrupt the classes for the day, questionnaires that were given out on Monday or Wednesday were retrieved on Wednesday or Friday.

### *Data Processing and Analysis*

There are at least two areas of physical and laboratory examinations that can be regarded as complete to a given school system according to a medical opinion during an interview with Dr. Gallon. There are 12 possible items in physical and 4 items for laboratory examinations. Each of the items listed in the physical and laboratory examinations are defined and simplified so that the students and the faculty members could understand and comprehend the meaning of the terms used. Each item is given a weight of one (1). The total perfect score was 12, which was converted to percentage. The Student/Faculty/Staff respondents were asked to check those physical/laboratory items that he/she has undergone.

The total score was categorized as follows:

Very Comprehensive	-	93-100 %
Moderately Comprehensive	-	86-92 %
Slightly Comprehensive	-	80-85 %
Not Comprehensive	-	0-79 %

The data gathered were recorded and processed with the use of computer. Tatistical Package for Social Sciences (SPSS) software was used in the analysis of data. Since this study is descriptive in nature, descriptive statistics like frequency and percentage were used.

## MAJOR FINDINGS

Data in Table 1 show the distribution of respondents according to different classifications. The respondents were composed of 150 female students and 113 male students, and 24 female and 6 male faculty and staff. As to their distribution by college, the Colleges of Nursing with 70 or 26.6%, Commerce with 48 or 18.3%, and Education with 46 or 17.5% registered the top three highest participation in this study. The least number of respondents came from the College of Agriculture which constitute a little over five percent (15 or 5.7%) of the total student population. Faculty and Staff were drawn purposively from the following colleges and departments: Agriculture, 1; Business Office, 6; Elementary, 2; Education, 2; High School, 2; HRD, 1; Life Sciences, 2; Medical Technology, 1; Medicine, 1; Nursing, 7; Printing Press, 1; RE, 1; Social Sciences, 2; and Theology, 1.

Table 1. Distribution of Respondents According to their Characteristics

Variable	Frequency	Percentage
<b>Entire Group (students)</b>	263	100
Female	150	57.0
Male	113	43.0
<b>Entire Group (Faculty and Staff)</b>	30	100
Female	24	80
Male	6	20
<b>Colleges (Students)</b>	263	100
Nursing	70	26.6
Commerce	48	18.3
Education	46	17.5
Engineering	37	14.1
Arts and Sciences	27	10.3
Computer Studies	20	7.6
Agriculture	15	5.7
<b>Colleges and Departments (Faculty and Staff)</b>	30	100
Nursing	7	23.3
Business Office	6	20.0
Elementary	2	6.7
Education	2	6.7
High School	2	6.7
Life Sciences	2	6.7
Social Sciences	2	6.7
Agriculture	1	3.3
HRD	1	3.3
Medical Technology	1	3.3
Medicine	1	3.3
Printing Press	1	3.3
RE	1	3.3
Theology	1	3.3

The physical and laboratory examinations performed on students, faculty and staff, and their perception on its comprehensiveness are presented in Table 2. The survey data suggested that four out of twelve physical examinations were very comprehensive, one was moderately comprehensive and two were slightly comprehensive.

Measurement of height and temperature (93.5%), blood pressure (94.7%), weight (94.3%), and pulse rate (94.7%) were the most comprehensively administered while prostate palpation for male (15.2%) and gastro intestinal auscultation (27.4%) were the least availed during the physical examination. This result showed that overall physical examinations comprehensiveness were only 58%. One would expect that physical examination for students should be comprehensive enough to include laboratory examinations because life and well being of our students were involved.

Survey results for Laboratory examinations showed that none of the examinations was perceived to be comprehensively administered to the students. Laboratory examinations like urinalysis (10.6%), fecalysis (9.1%) and CBC (44.8%) were not adequately availed of by many students as expected. Chest X-ray (10.6%), which a layman would regard as one of the best diagnostic tools, was done to only a few students. This survey result is in contrast to what was obtained in the University of the Philippines System, St. La Salle University, and the University of Sto. Tomas as discussed in the literature reviewed that “students are required diagnostic medical examinations before admission into any course”.

Table 2. Physical and Laboratory Examinations Conducted for Students

Type of Examinations	Respondents		Perceived Level of Comprehensiveness
	Frequency	Percentage	
<b>Physical</b>			
Physical General assessment (health history interview)	222	84.2	Slightly Comprehensive
Height and Weight Measurement	248	94.3	Very Comprehensive
Temperature	246	93.5	Very Comprehensive
Pulse Rate	249	94.7	Very Comprehensive
Respiratory Rate	212	80.6	Slightly Comprehensive
Blood Pressure	249	94.7	Very Comprehensive
Examination of Visual Ability	238	90.5	Moderately Comprehensive
Cardiac Auscultation	89	33.8	Not Comprehensive
Lung Auscultation	97	36.9	Not Comprehensive
Gastro Intestinal Auscultation	72	27.4	Not Comprehensive
Breast Palpation (female)	135	51.3	Not Comprehensive
Prostate Palpation (male)	40	15.2	Not Comprehensive
Liver Palpation	77	29.3	Not Comprehensive
<b>Laboratory</b>			
Urinalysis	28	10.6	Not Comprehensive
Fecalysis	24	9.1	Not Comprehensive
CBC	39	14.8	Not Comprehensive
Chest X-Ray	28	10.6	Not Comprehensive

As shown in Table 3, six areas of physical examinations namely temperature measurement, pulse rate determination, prostate palpation, height or weight measurement, and blood pressure determination, were considered very comprehensive by the faculty and staff respondents, with the first three availed of by all the respondents.

All laboratory examinations for faculty and staff were perceived to be done in a very comprehensive manner except the Chest X-ray.

The survey data also revealed that the physical general assessment (health history and interview), and respiratory rate determination administered to students, faculty and staff were slightly comprehensive, although, under normal condition this should be very comprehensive. Most of these laboratory examinations were administered on “follow-up” basis.

Table 3. Physical and Laboratory Examinations Conducted For Faculty and Staff

Type of Examinations	Respondents		Perceived Level of Comprehensiveness
	Frequency	Percentage	
<b>I. Physical</b>			
Physical general assessment (health history interview)	24	80.0	Slightly Comprehensive
Height and Weight Measurement	28	93.3	Very Comprehensive
Temperature	30	100.0	Very Comprehensive
Pulse Rate	30	100.0	Very Comprehensive
Respiratory Rate	25	83.3	Slightly Comprehensive
Blood Pressure	29	96.7	Very Comprehensive
Examination of Visual Ability	28	93.3	Very Comprehensive
Cardiac Auscultation	15	50.0	Not Comprehensive
Lung Auscultation	14	46.7	Not Comprehensive
Gastro Intestinal Auscultation	10	33.3	Not Comprehensive
Breast Palpation (female)	20	66.7	Not Comprehensive
Prostate Palpation(male)	6	100.0	Very Comprehensive
Liver Palpation	14	46.7	Not Comprehensive
<b>II. Laboratory</b>			
Urinalysis	29	96.7	Very Comprehensive
Fecalysis	30	100.0	Very Comprehensive
CBC	29	96.7	Very Comprehensive
Chest X-Ray	10	33.3	Not Comprehensive

Legend:

Very Comprehensive	93-100 %
Moderately Comprehensive	86-92 %
Slightly Comprehensive	80-85 %
Not Comprehensive	0-79 %

The data in Table 4 indicates that there were laboratory examinations recommended for a few students by the physicians after the physical examinations. The top three laboratory examinations recommended were X-ray (13%), ECG (9%) and Cholesterol analysis (8%). Although the number of students who were asked to go for further laboratory examinations was very few, the number ran across the colleges.

Table 4. Additional Laboratory Examinations Recommended For Students by the Physicians (N=263)

Laboratory Examination	Frequency	Percentage
X-Ray	35	13
ECG	23	9
Echocardiogram	12	4
Ultrasound	12	4
Pap Smear	14	5
FBS	14	5
Cholesterol	22	8

Additional or further laboratory examinations were also recommended for faculty and staff. Nobody was asked for further laboratory in the colleges of Agriculture, Education and Theology, as well as in High School and Printing Press. The Business Office has the largest number of staff who were asked for further laboratory examination, particularly some of the predictive diagnostic tools like X-ray, ECG, and Echocardiogram.

Table 5. Additional Laboratory Examinations Recommended For Faculty and Staff by the Physician (N=30)

Laboratory Examination	Frequency	Percentage
X-Ray	9	30
ECG	5	17
Echocardiogram	2	7
Ultrasound	4	13
Pap Smear	3	10
FBS	4	13
Cholesterol	5	17
Others	3	10

Moreover, survey data presented in Table 6 show that students suggested additional physical examinations which are probably based on their previous ailment. Examples of such physical examinations were Cardiac Auscultation (70.3%), Lung Auscultation (70%), and Liver Palpation (63.5%).

The majority of the faculty and staff indicated their intention to include in the annual physical examinations Cardiac Auscultation (76.7%) and Liver Palpation (66.7%), among others. The survey result further revealed that the majority of the faculty and staff were in favor of expanding the current physical examinations to include those suggested.

Table 6. Additional Physical Examinations

Physical Examination	Frequency	Percentage
<b>Suggested by Faculty &amp; Staff (N=30)</b>		
Examination of Visual Ability	17	56.7
Cardiac Auscultation	23	76.7
Lung Auscultation	19	63.3
Gastro intestinal auscultation	17	56.7
Breast Palpation (female)	15	50.0
Prostate palpation(male)	8	26.7
Liver Palpation	20	66.7
<b>Suggested by Students (N=263)</b>		
Examination of Visual Ability	154	58.6
Cardiac Auscultation	185	70.3
Lung Auscultation	184	70
Gastro intestinal auscultation	163	62
Breast Palpation (female)	108	41.1
Prostate palpation (male)	75	28.5
Liver Palpation	167	63.5

Survey data in Table 7 show that most of the students want laboratory examinations included in the conduct of physical examination. The data further reveal that regardless of the college affiliation of students, the majority were generally in favor of having laboratory examinations as part of the physical examination.

**Table 7. Distribution of Students who Want Laboratory Examination to be Included in the Physical Examination**

<b>College</b>	<b>Frequency</b>	<b>Percentage</b>
Agriculture (N=15)	12	80
Arts and Sciences (N=27)	24	88
Commerce (N=56)	40	83
Computer Studies (N=20)	12	60
Education (N=46)	37	80
Engineering(N=37)	27	73
Nursing (N=70)	60	86

While the majority of the student respondents were in favor of the inclusion of laboratory examinations in the physical examination, faculty and staff were unanimous in their decision to include laboratory examination as part of the annual physical examinations with the exception of a staff from the College of Theology (Table 8). The students, faculty and staff expressed their willingness to include laboratory examination such as: X-ray, ECG, echocardiogram, FBS, and cholesterol analyses.

**Table 8. Distribution of Faculty and Staff who Want Laboratory Examination be Included in the Physical Examination**

<b>Colleges/Departments</b>	<b>Frequency</b>	<b>Percentage</b>
Agriculture (N=1)	1	100
Business Office (N=6)	5	83
Elementary (N=2)	2	100
Education (N=2)	2	100
High School (N=2)	2	100
Life Sciences (N=2)	1	50
Med Tech (N=1)	1	100
Medicine (N=1)	1	100
Nursing (N=7)	6	86
Printing Press (N= 1)	1	100
RE (N=1)	1	100
Social Sciences (N=2)	1	50

As shown in Table 9, 133 out of the 263 student respondents (50.6%) wanted the University to shoulder the expenses for their additional laboratory examinations. On the other hand, 128 out of 263 (48.7%) wanted the laboratory examination to be paid by themselves. Only two students wanted the insurance or health care company to finance their additional laboratory examination.

Table 9. Distribution of Student Respondents as to who should Pay the Additional Medical Examinations for Students.

College	Myself	University	Insurance	Total
Agriculture	3	12	0	15
Arts and Sciences	16	11	0	27
Commerce	19	29	0	48
Computer Studies	8	11	1	20
Education	21	24	1	46
Engineering	18	19	0	37
Nursing	43	27	0	70
<b>Frequency</b>	<b>128</b>	<b>133</b>	<b>2</b>	<b>263</b>
<b>%</b>	<b>48.7%</b>	<b>50.6%</b>	<b>0.7</b>	<b>100.0</b>

The responses by the faculty and staff reflected maturity and concern for their health when an overwhelming majority (24 out of 30 or 80%) agreed to pay for additional laboratory examination. Only 4 suggested that the University should pay while 2 or 7% suggested that the health care or insurance company handle the payment.

Table 10. Persons Responsible for Paying Additional Medical Examinations for Faculty and Staff

College	Myself	University	Insurance	Total
Agriculture	1	2	0	6
Business Office	4	0	0	2
Elementary	2	0	0	2
Education	2	0	0	2
High School	1	0	1	1
HRD	1	0	0	2
Life Sciences	1	0	1	1
Med Tech	1	0	0	1
Medicine	1	0	0	7
Nursing	7	0	0	1
Printing Press	1	0	0	1
RE	1	0	0	2
Social Sciences	1	1	0	1
Theology	0	1	0	1
<b>Frequency</b>	<b>24</b>	<b>4</b>	<b>2</b>	<b>30</b>
<b>%</b>	<b>80.0</b>	<b>13.3</b>	<b>6.7</b>	

## CONCLUSIONS AND RECOMMENDATIONS

### *Conclusions*

From the major findings of the study, the following conclusions are drawn:

1. The physical examinations conducted were general assessment (health history interview), Height and weight measurement, Temperature, Pulse rate, Respiratory rate, Blood pressure, Examinations of visual ability, Cardiac auscultations, Gastro intestinal Auscultations, Breast palpation (female) and Prostate palpation (male), and Liver palpation. On the other hand, the laboratory examinations were: Urinalysis, Fecalalysis, CBC, and Chest X-Ray.

2. Seven of the twelve physical examinations are perceived by the respondents to be comprehensive. All the four laboratory examinations are perceived to be not comprehensive.

3. The majority of the students, faculty and staff want to avail of additional physical examinations like, Cardiac Auscultation, Liver Palpation, and Lung Auscultation. They also want laboratory examinations like X-Ray, ECG, Echocardiogram, FBS and Cholesterol examinations to be included in the annual physical examination.

4. The majority of the student respondents want the University to shoulder the expenses for additional laboratory examinations, whereas, the faculty and staff are willing to pay for the additional laboratory examinations.

### *Recommendations*

In the light of the conclusions, the following recommendations are advanced.

1. Since all the laboratory examinations conducted were not comprehensive for the students, the University should include laboratory examinations for the incoming freshmen if it is not doable for the existing students.

2. Since most of the faculty and staff were asked by the Doctor to undertake additional laboratory examinations, this would seem to show that the existing laboratory examinations are inadequate. The University should therefore encourage all the faculty and staff to subscribe for membership to any of the existing accredited health insurance, and probably increase her share of health maintenance contribution fees preferably by 50%

for the faculty and staff.

3. Since the majority of the students want the University to shoulder the cost of additional laboratory examinations, the university administration should hold dialogue with the student representatives or leaders to come up with “win-win” solutions.

4. Finally, further study is recommended to determine parents' or stakeholders' interest in the inclusion of laboratory or diagnostic medical examinations in the annual physical examinations.

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