

## FITNESS STATUS OF FACULTY AND EMPLOYEES: BASIS FOR PROPOSED “FITPRO”

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### ABSTRACT

*This study aimed to assess the Health-related Fitness Status of PUP administrative employees and faculty members and come up with an appropriate Physical Fitness Program (FitPro). The study utilized the descriptive method of research with researcher-made questionnaire and physical fitness tests as the main instruments in data gathering. There were 120 PUP employees who participated in the study and were drawn through convenience sampling, and responses were treated using frequency distribution, percentage, and weighted mean. Results revealed that most of the respondents had poor physical profile which made them uncomfortable to undergo fitness tests. This health case of faculty members and employees must prod the administration to create a program that would aggressively address the need for a more health-conscious academic community to be able to keep up with the demand of servicing more students.*

**Keywords:** Health assessment, health related fitness, FitPro.

### 1. INTRODUCTION

The number of non-communicable diseases has been constantly increasing globally. According to World Health Organization (2017), Ischemic heart disease and stroke are the world's biggest killers, accounting for a combined 15 million deaths in 2015, and have remained the leading causes of death globally in the last 15 years worldwide. For instance, chronic obstructive pulmonary disease claimed 3.2 million lives, while lung cancer caused 1.7 million deaths, and diabetes killed 1.6 million people, up from less than 1 million in 2000 (World Health Organization). This statistics runs parallel to the data of the Department of Health in the Philippines. According to DOH (2013), diseases of the heart and of the vascular system are the top 2 leading causes of death in addition to Diabetes Mellitus which ranked 8<sup>th</sup> (Top Ten Causes of Death, 2011-2013 in the Philippines).

These diseases may be related to unhealthy or sedentary lifestyle of this generation. Lack of physical activity is a significant risk factor for non-communicable diseases (NCD's) such as stroke, diabetes, and cancer. Furthermore, people engage in fewer physical activities in many countries with 23% of adults and 81% school-going adolescents being inactive (WHO, 2017). Thus, to support different countries in their efforts to address prevention and management of non-communicable diseases, the World Health Organization developed a global action plan for the prevention and control of NCDs 2013-2020, which includes nine global targets that have the greatest impact on global NCD mortality (Islam et al., 2014).

It is generally acknowledged that quality of life and health benefits are associated to having an active lifestyle. The workplace is a place where most of the employees spend at least 6-8 hours of work in a day, and most of the time in school setting, long hours are rendered doing paper works and submission of requirements. Even if the physical activities are offered as a part of company programs, participation in physical exercise can be challenging for employees. Studies show that, at best, there is moderate compliance with workplace physical exercise (Andersen et al., 2012).

Spending more time sitting, is a health risk despite engaging in the recommended levels of daily activity (Dunstan, Howard, Healy, & Owen, 2012). Research findings have shown that physical inactivity and negative lifestyle habits pose a serious threat to health. Movement and physical activity are basic functions for which the human organism was created. Advances in modern technology, however, have all but eliminated the need for physical activity in daily life. Thus, physical activity is no longer a natural part of existence. This epidemic of physical inactivity is the second greatest threat to US public health and has been termed Sedentary Death Syndrome, or SeDS (Hoeger, & Hoeger, 2015).

A sound cardiorespiratory endurance program contributes greatly to enhancing and maintaining good health. Of the four health-related physical fitness components, cardiorespiratory endurance is the single most important except during older age, when strength seems to be more critical. Even though certain levels of muscular strength and flexibility are necessary to perform activities of daily living, a person can get by without a lot of strength and flexibility. However, a person cannot do anything without a good cardiorespiratory system (Hoeger, & Hoeger, 2013).

As for the body's reaction to stress, it is deemed to be a response to perceived threat activated by the sympathetic nervous system (Wright et al., 2011). In simpler terms, stress is the body's mental, emotional, and physiological response to any situation that is new, threatening, frightening, or exciting. When stress occurs in several areas, then it is likely that stress will be greater. The work environment and the structures in place to support staff are important in alleviating stress (Firth-Cozens & Cornwell, 2009).

Health is the most valuable and precious aspect of life, but due to numerous responsibilities, most of the time, people tend to ignore its importance over the needs of work, family, friends, and others. Some people realize the essential of having a sound (good) health condition in times of sickness wherein the body is about to deteriorate and that there is no other solution but to look for medical attention. Good health is a state of all round physical, mental, and social well-being of a person, which enables one to live and work normally and resist the negative impact of his environment. As a matter of fact, good and strong health is not something that is sold in the market or grocery store, but it is rather something to be created and maintained at the same time. In addition, good health is achieved by following a few collective patterns which are fitness and health related. Having sensitivity to this matter, the importance of promoting healthy lifestyle with all its benefits will also be realized. Hence, one can start with following the pattern of eating the right food groups at a right time and exercising consistently. These healthy patterns will help reduce the probability of illness which, in return, will help the body to become more functionally responsive to the needs and demands of family, friends, work, and others.

The requirement of improving office performance through employee's contribution in achieving the target somehow affects the overall health conditions of the employee. As the adage says, "health is wealth." This means that a healthy body is tantamount to a healthy mind. If one is physically healthy and fit, most likely, he can do the tasks assigned to him because of his strength and endurance to perform activities and to endure stressors brought by changes and challenges. Study after study shows that the benefits of company's wellness program is not merely providing healthy lifestyle to the employee but has a great return of investment on the part of the company or employer. One of the most common problems

encountered by the company is the employee's tardiness and absenteeism which could be addressed through establishing responsive fitness program because employee's with good health behaviour, healthy blood pressure, normal glucose and cholesterol and are not overweight lower absenteeism. Also, healthy employees are likely to increase production, initiate happy working condition, and boost morale/self-worthy among co-employees that will lead to costumer's satisfaction and may lead to uplift the institution's status quo.

The Polytechnic University of the Philippines is one of the leading producers of professionals in the country. In fact, their graduates are the most preferred by leading companies in the country. The recognition given by outsiders (companies) is the result of consolidated efforts among administrators and employees of the university; thus, maintaining its status is a big challenge to all and may have significant impact to their health condition. Based on the PUP medical report, most of the common health-related among faculty and employees are heart related diseases, diabetes, pneumonia, and cancer. Being in the university for several years, the researchers have witnessed the challenges and struggles of administrators and employees in order to accomplish set targets which, in turn, necessitates assessment their fitness status, so they may benefit from the fitness program to be proposed. Considering that PUP has huge number of faculty members and employees catering to some seventy thousand student population, the faculty members and employees are the perfect subjects of the study in hope that the university may develop a labor community that generally possesses good health and better self-worth. Moreover, achieving healthy and active lifestyle may reflect on the service the faculty members and employees provide which will likely yield more skillful graduates and in-demand graduates.

The researchers believe that increasing employees' physical activity can create a healthier workforce, increase employees' productivity, and decrease employees' risk of developing costly and debilitating chronic diseases. Thus, a research-based wellness program is highly needed to provide quality health and wellness programs for all employees.

The study assessed the health-related fitness status of Polytechnic University of the Philippines faculty members and employees to come up with an appropriate Physical Fitness Program (FitPro). Specifically, this sought to accomplish the following objectives: a) to determine the medical background, anthropometric measurements, and health-related fitness of the employees; b) to ascertain the respondents' physical activity interest, how actively they engage in physical activity as well as their activity of interest, and how they value importance of active participation in their preferred physical activity; c) to identify the level of agreement in physical activity/ exercise readiness; and d) to know the respondent's preferred future physical activity and physical exercise schedule. This study postulates that having activities that promote health among employees far costs less than mitigating ill consequences unhealthy employees. If one is physically healthy and fit, most likely, it will affect his work productivity. Hence, the researchers have affirmed the importance of developing one's self through fun and enjoyable sports and physical activities through developing an appropriate, enjoyable and effective Health and Fitness Program (FitPro) for PUP community is highly needed.

## **2. METHODS AND MATERIALS**

### **2.1 Participants**

The study utilized descriptive method of research. Purposive (convenience) sampling was used to include all the employees and faculty in different offices. There were 120 PUP personnel who participated in the study based on their availability. The majority of the respondents are females with 74 or 61.67% while the males are 46 or 38.33%. Most of them belong to 41- to -50 age group with 33 or 27.5%; followed by 30- and -below age group, with

30 or 25%. Most of the respondents are Christians with 116 or 96.97% and are married with 70 or 58.33%. Out of 120 respondents, 62 or 51.67% are casually employed while those with permanent status are 44 or 36.67%; faculty members with temporary status are 6 or 5% while those with part-time status are 5 or 4.17%. Others are co-terminus, with 2 or 1.67% and only 1 or .83%, did not provide an answer.

## 2.2 Procedure

A researcher-made instrument and physical fitness tests were designed to determine the demographic, anthropometric, and physical fitness profile of the faculty and employees; their perception on their activity of interests, practices, and its importance; their readiness to participate in an exercise or physical activity; and their preferences as for the future physical activity for PUP employees and faculty. The survey instrument was validated by experts in the field and pilot testing was to check its validity and reliability before it was administered to the respondents. Upon the approval of instrument, the researchers immediately with the different offices based for their availability and scheduled the date and time of for the administration of the survey questionnaires and physical fitness tests. Immediately after retrieving the questionnaires, the data were submitted for statistical treatment and were organized for presentation, interpretation, and analysis.

The second part of data generation was composed of physical fitness tests administered in the gymnasium. In addition, Handheld Bioelectric Impedance Device was also used in gathering the anthropometric measurements such as body fat percentage and body mass index of the respondents.

**Figure 1: Handheld Bioelectric Impedance Device**



## 2.3 Statistical Analysis

Collected data were tallied using Microsoft Excel 2010 and statistical analysis computed using SPSS. Frequency distribution, weighted mean, and percentage were used as statistical tools in interpreting the data.

## 3. RESULTS AND DISCUSSION

**Table 1: Medical background, anthropometric measurements, and health-related fitness of the respondents**

<b>Signs and Symptoms</b>	<b>F</b>	<b>%</b>
High blood pressure	19	11.24
Dizziness	19	11.24
Overweight	30	17.75
<b>Diagnosed with health related conditions</b>		
Hypertension	18	13.04
Bronchial asthma	9	6.52
History of surgery/ operation	13	9.42
<b>Family History</b>		
Hypertension	46	25.14
Diabetes	41	22.4
Heart illness	21	11.48

Data reveal that respondents experience disease signs and symptoms such as being “overweight” which gets the highest frequency of 30 or 17.75%, followed by “high blood pressure and dizziness” both with 19 or 11.25%. On the other hand, respondents have been diagnosed with “hypertension” which ranked first with 18 or 13.04%, followed by “history of surgery/operation” with 13 or 9.42%, and “bronchial asthma” with 9 or 6.52%. Moreover, “hypertension”, “diabetes”, and “heart illness” are the top three (3) family health problems of the respondents with frequencies of 46 or 25.14%; 41 or 22.4%; and 17 or 9.29% respectively. These findings conform with the study by Senekal, Seme, de Villiers, and Steyn (2015) which states that the most common health cases among educators include having high blood pressure, high cholesterol, and diabetes.

Diabetes and hypertension frequently occur together. There is substantial overlap between diabetes and hypertension in causes and disease mechanisms (Cheung & Li, 2012). Congruent to this claim, most of the PUP employees were diagnosed with hypertension and at the same time experiencing overweight problem. It also reflects that these problems were also related to their family history health problems.

**Table 2: Waist to Hip Ratio**

Health Risk	F	%
High	49	40.83
Moderate	29	24.17
Low	34	28.33
No Data	8	6.67
<b>Total</b>	<b>120</b>	<b>100%</b>

Table 2 reveals that in terms of waist to hip ratio measurement, 49 or 40.83% of the respondents are in “high health risk”, while 29 or 24.17% of the respondents are in moderate health risk. On the other hand, 34 or 28.33% of the respondents are in “low health risk”.

According to Cheung & Li (2012) central or abdominal obesity is a prominent cause of hypertension and diabetes. These data only confirm that employees who are experiencing hypertension may have problems in waist-hip-ratio measurement which soon may turn to more serious health problems like diabetes and heart illnesses. Moreover, as concluded in the study of Qiao & Nyamdor (2010) regarding type two (2) diabetes, anthropometric measurements such as; BMI, waist circumference, waist–hip ratio and waist–height ratio, performed similarly in predicting risk<sup>[13]</sup>. Thus, monitoring these measurements for faculty and admin employees are highly needed in observing oneself with regards to possible health risk which may be encountered.

**Table 3: Body Fat Percentage**

Health Risk	F	%
Low	1	.84
Normal	28	23.53
Slightly High	24	20.17
High	66	55.46
No data	1	
<b>Total</b>	<b>120</b>	<b>100%</b>

As indicated in the table, 66 or 55.46% of the respondents are at “high” health risk, while 24 or 20.17% are at “slightly high” health risk. On the contrary, only 28 or 23.53% are within “normal” status. These results sound alarming that more than half of the employees are at high risk, another quarter are slightly high, while only the remaining one fourth or 25% are in low to normal health risk.

As stated in the study by Juntaping et.al, (2017), body fat percentage is considered to be the most accurate obesity evaluation tool, thus, it can be concluded that having a high body fat percentage places one at high risk in terms of health-related diseases. Likewise, Kim, Han & Yang (2012) have concluded that high body fat percentage is associated with high cardio-metabolic risks, regardless of abdominal obesity, in normal-weight adults. Thus, the need for



follow-up screening for PUP employees with a high body fat percentage is highly recommended to detect and prevent possible cardio-metabolic and other related diseases.

**Table 4: Body Mass Index**

Category	Health Risk	F	%
Underweight	Increased	6	5
Acceptable	Low	22	18.33
Acceptable	Very Low	27	22.5
Overweight	Increased	42	35
Obesity 1-3	High-extremely High	21	17.5
<i>Obesity 1</i>	<i>High</i>	<i>13</i>	<i>10.83</i>
<i>Obesity 2</i>	<i>Very High</i>	<i>6</i>	<i>5</i>
<i>Obesity 3</i>	<i>Extremely High</i>	<i>2</i>	<i>1.67</i>
<i>No data available</i>		<i>2</i>	<i>1.67</i>
<b>Total</b>		<b>120</b>	<b>100</b>

Based on Body Mass Index, table 4 indicates that, 42 or 35% of the respondents are “overweight” with an increased health risk, while 27 or 22.5% are in “acceptable” status with very low health risk. Unfortunately, 21 or 17.5% of the respondents are in “Obesity 1-3” category. These findings adhere to the claim of Huxley et al. (2010) that based on reviews, there was convincing evidence that measures of general obesity (e.g. BMI) and measures of abdominal adiposity (e.g. waist circumference, waist–hip ratio and waist–height ratio) are associated with Cardiovascular Disease risk factors and incident Cardiovascular Disease events. It implies that due to their current fitness status in terms of body composition, the majority of PUP employees are at moderate to high health risk.

**Table 5: Cardio-Respiratory Fitness**

Performance Rating	F	%
Excellent	0	0
Very Good	0	0
Good	0	0
Average	0	0
Fair	0	0
Poor	0	0
Very Poor	11	9.17
Did not perform the test	109	90.83
<b>Total</b>	<b>120</b>	<b>100</b>

As revealed in table 5, 109 of the respondents opted not to perform the beep test, while 11 or 9.17% have “very poor” rating performance. It appears that they were not confident in doing the test. This might be because of their perceived health status, that they assume they are not capable of doing or passing the test.

Based on Medicine and Science in Sports Exercise, it is confirmed that sedentary lifestyle causes health related diseases, and it is followed up by the study of León-Latre et al. (2014) stating that workers who spend more time sitting show worse inflammatory and insulin resistance profile independently of the physical activity performed. The alarming result as stated above should be given utmost attention by the university. Thus, implementation of fitness and wellness program is deemed necessary.

**Table 6: Muscular Strength and Endurance**

<i>Crunches</i>		<i>Modified Dip/ Push-up</i>		<i>Bent Leg Curl-up</i>		<b>Fitness Category</b>
<i>f</i>	<i>%</i>	<i>F</i>	<i>%</i>	<i>f</i>	<i>%</i>	
5	4.17	3	2.5	3	2.5	Excellent
14	11.67	18	15	10	8.33	Good
18	15	5	4.17	10	8.33	Average
16	13.33	9	7.5	21	17.5	Fair
56	46.67	72	60	49	40.83	Poor
11	9.17	13	10.83	27	22.5	No data available
<b>120</b>	<b>100</b>	<b>120</b>	<b>100</b>	<b>120</b>	<b>100</b>	

Data have revealed that, in terms of muscular strength and endurance, respondents who performed modified dip/push-up, crunches, and bent leg-curl, have “poor” fitness rating. It may be due to the current body composition status of PUP employees, in which most are overweight and obese which leads for them to have difficulty in performing muscular strength and endurance tests.

Muscular strength is strongly correlated to most common movements such a jumping, sprinting, agility tasks, and sport-specific performance. Additionally, having good level of muscular strength and endurance helps decrease injury rate (Suchomel, Nimphius, & Stone, 2016). Thus, the need for developing muscular strength and endurance is quite significant not only for enhancing sports performance, but also in maintaining good health.

**Table 7: Muscular Flexibility**

<i>Finger Touch and Modified Sit and Reach</i>		<b>Fitness Category</b>
<i>F</i>	<i>%</i>	
0	0	Excellent
3	2.5	Good
22	18.33	Average
56	46.67	Fair
39	32.5	Poor
<b>120</b>	<b>100</b>	

Table 7 presents that in terms of muscular flexibility, 56 or 46.67% of the respondents are in “fair” fitness category, followed by 39 or 32.5% who are in “poor” fitness category.

Flexibility is the intrinsic property of the body tissues that determines the range of motion achievable without injury at a joint or group of joints. Moreover, extreme inflexibility and hyper flexibility increase the risk of injury (Waterworth, 2014) <sup>[19]</sup>. Therefore, the need for improving the muscle flexibility is significant both for enhancing physical performance and maintaining ones fitness level.

## **2. Respondent’s physical activity interest, activity engagement and the importance of active participation in the preferred physical activity**

**Table 8: Physical activity interest, activity engagement and the importance of active participation in the preferred physical activity**

INTEREST TEST	f	%	Rank	PRACTICES TEST	f	%	Rank	IMPORTANCE	f	%	Rank
<b>SPORTS EVENT</b>											
Badminton	49	26.9	1	1-3 hours 3x a week	16	13.01	3	Because it relaxes me	51	21.9	1
Basketball	31	17	3	1-3 hours once a week	30	24.39	1	Keeps me bonded with family, friends, and relatives	45	19.3	3
Volleyball	38	20.9	2	Others Once a month, Occasional Sometimes/ Seldom/ During free time	29	23.58	2	Keeps me healthy	50	21.5	2
<b>DANCE ACTIVITY</b>											
Zumba/Dance Aero	50	36.2	2	1-3 hours daily	6	2.94	3.5	Because it relaxes me	36	17.7	1
Ballroom Dance	17	12.3	3	1-3 hours 3x a week	6	2.94	3.5	Relieves stress	35	17.2	2
Others	8	5.8	4	1-3 hours once a week	20	9.8	1	Keeps me healthy	33	16.2	3
				Others Once a month/Occasional Sometimes/ Seldom/ During free time	19	9.31	2				
<b>CARD/TABLE GAMES</b>											
Tong-its	18	12.7	2	1-3 hours daily	2	1.64	3	Because it relaxes me	14	10	3
Pusoy Dos	8	5.63	3	1-3 hours once a week	14	11.48	2	Relieves stress	17	12.1	2
Chess	24	16.9	1	Others Once month Occasionally Seldom/ Sometimes	20	16.39	1	Keeps me bonded with family, friends, and relatives	22	15.7	1
<b>OTHER RECREATIONAL ACTIVITIES</b>											
Cleaning	69	14.9	2	1-3 hours daily	27	21.26	1.5	Because it relaxes me	60	22.8	2
Cooking	77	16.6	1	1-3 hours 5x a week	8	6.3	4	Relieves stress	54	20.5	3
Watching Television	66	14.3	3	1-3 hours 3x a week	16	12.6	3	Keeps me bonded with family, friends, and relatives	61	23.2	1
				1-3 hours once a week	27	21.26	1.5				

The results reveal that the most common sports activities the employees and faculty members engage in is badminton which ranks first with 49 or 26.9%, followed by volleyball and basketball with 38 or 20.9% and 31 or 17%, respectively. Furthermore, it shows that 30 or 24.39% of the respondents engage in the given physical activities “1-3hrs once a week” and they value such physical activity “because it relaxes and keeps them healthy”.

In terms of dance activities, they claim to be engaging in Zumba dance and Ballroom dancing which the respondents do “1-3 hours once a week” with 20 or 9.8% and “sometimes/seldom” with 19 or 9.31%. When it comes to the importance of such physical activity, they responded that “it relaxes and relieves their stress” the highest frequency of 36 or 17.7% and 35 or 17.2%

On the other hand, “Chess” and “Tong-its” are the most common table/card games played by the respondents. It also shows that they play “seldom/occasionally/sometimes” with frequency of 20 or 16.39%, while they value these physical activities because it “keeps them bonded with their family, friends, and relatives” and “relieve stress”. In addition, “cooking”, “cleaning”, and “watching television” are other recreational activities that the respondents engage in with 77 or 16.6%, 69 or 14.9%, and 66 or 14.3%, respectively. It also shows that they do such activity for “1-3 hours daily” and “1-3 hours a week” with similar frequency of 27 or 21.26%, while they value physical activity as it “keeps them bonded with their family, friends, and relatives”, “it relaxes them” and “relieves stress”.

Chen et al.’s (2017) study has revealed that gender, educational attainment, health-motivated interest, and appearance-motivated were important factors affecting recreational sports participation. This can only prove that personal interest, gender, health-motivated



interest, and appearance motivated, time schedule are to be considered in crafting the fitness program.

### 3. Level of Agreement on the Respondent’s Physical Activity/ Exercise Readiness

**Table 9: Level of Agreement on the Respondent’s Physical Activity/ Exercise Readiness**

Physical activity/exercise readiness survey	Weighted Mean	Verbal Interpretation
I can walk, ride a bike, swim, play my favorite sports, perform my favorite dance routine and do my other physical activities	3.54	Strongly Agree
I enjoy doing physical Activities	3.53	Strongly Agree
I believe doing physical activity help reduce the risk for diseases and premature mortality	3.82	Strongly Agree
I have previously participated in an organized physical exercise	3.32	Strongly Agree
I believe exercise contributes to better health	3.88	Strongly Agree
I have experienced the feeling of being physically fit	3.55	Strongly Agree
I can envision myself exercising	3.47	Strongly Agree
I am contemplating a physical exercise program	3.18	Agree
I am willing to stop contemplating and give physical exercise a try for a few weeks	3.22	Agree
I am willing to set aside time at least three times a week for physical exercise	3.42	Strongly Agree
I can find other people who would like to do physical exercise with me	3.33	Strongly Agree
I can find a place to do physical exercise (the streets, parks, center, etc.)	3.34	Strongly Agree
I will exercise when I am moody, fatigued, and even when the weather is bad	2.78	Agree
I am willing to spend a small amount of money for adequate physical exercise clothing (shoes, shorts, leotards, or swimsuit)	3.34	Strongly Agree
If have any doubts about my present state of health, I will see a physician before beginning an exercise program	3.32	Strongly Agree
Physical exercise will make me feel better and improve my quality of life	3.80	Strongly Agree

Table 8 shows that the statement, “I believe exercise contributes to better health”, ranked first with a weighted mean of 3.88; followed by “I believe doing physical activity help reduce the risk for diseases and premature mortality”; “Physical exercise will make me feel better and improve my quality of life”; I have experienced the feeling of being physically fit”; and “I can walk, ride a bike, swim, play my favorite sports, perform my favorite dance routine and do my other physical activities” with weighted mean scores of 3.82, 3.83, 3.55, and 3.54 respectively, and are all interpreted as strongly agree. This only reveals that PUP employees are very much ready and willing to participate in different physical and recreational activities.

Hervensalo and Lintunen (2011) have cited Casperon, et al. and define physical activity as the sum of any voluntary movement produces by skeletal muscle that result to increase in energy expenditure. Also, psychological and physiological conditions are the determinants of sports participation. Hence, with the result of the study and the literature have affirmed in concluding that proper protocol and appropriate physical activities should be included in the fitness program.

### 4. Respondent’s Preferred Future Physical Activity and Exercise Schedule

**Table 10: Preferred Future Physical Activity and Exercise Schedule**

Activity Preference	Weighted Mean	Rank	
Zumba/Dance Aerobics/Tae-bo and alike	6.03	3	
Badminton	6.53	2	
Running/Walking	6.61	1	
Swimming	5.58	4	
Volleyball	5.13	5	
Preferred Physical Exercise Schedule	F	%	Rank
Every day between 7:30am – 9:30am (1 hour daily)	17	13.6	2
Every day between 11:00am – 2:00pm (1 hour daily)	3	2.4	8
Every day between 4:00pm-7:00pm (1 hour daily)	14	11.2	5
Three times a week between 7:30am – 9:30am	15	12	3.5
Three times a week between 11:00am – 2:00pm	4	3.2	6.5
Three times a week between 4:00pm-7:00pm	53	42.4	1
Others	15	12	3.5
No Response	4	3.2	6.5

Results reveal that running/walking, badminton, zumba/dance aerobics/ tae-bo, swimming, and volleyball are the top five (5) most preferred by the respondents. Moreover, they prefer doing physical activities “three times a week between 4:00-7:00pm” with 53 or 42.4%; second is “every day between 7:30am-9:30am (1hr daily)” with 17 or 13.6%. It only appears that the employees preferred a variety of activities and would want to participate in such physical activities before or after their working hours.

A research by Kara & Demirci (2010) shows that some 37.6% of the respondent prefer to use their spare time in recreational activities, 30% for non-recreational activities, 29.7% listing to music, and 2.7% visiting relatives and friends. These results therefore support the notion that recreational activities are always an option to utilize their spare time, and proper scheduling is necessary.

#### 4. CONCLUSION

The study concludes that being overweight, having high blood pressure, and dizziness are the most common signs and symptoms experienced by the respondents. In addition, the majority of the respondents were diagnosed with hypertension, history of surgery/operation, and bronchial asthma, while hypertension, diabetes, and heart illness are the most common family health problems. Most of the respondents were under overweight to highly obese status which placed them from moderate to high health risk. As for health-related fitness level, the majority of the employees failed to have a good fitness performance which resulted to having very poor cardio-respiratory fitness, muscular strength and endurance although they yield fair performance in flexibility. With the high number of employees with high prevalence of weight problem, added risk of central adiposity, and low health related fitness level, it could be argued that faculty and admin employees had high risk of developing Non-Communicable Diseases (NCDs).

As regards their physical activities, employees are engaged in Badminton, Volleyball, Basketball, Zumba and Ballroom Dance. In terms of playing board or card games, Chess, and Tong-its are the most common activities, while in other recreational activities, cooking, cleaning and watching movies. The majority of the respondents usually allotted 1-3hours once a week for such activities, except for the table and card games which they seldom play. Also, employees stated that they value physical activity because it relaxes them and relieves stress, keeps them bonded with family, friends, and relatives, and keeps them healthy. Moreover, the PUP employees strongly agreed in the positive benefits of engaging physical activities and are very much ready and willing to participate in different physical and recreational activities. Furthermore, Running/Walking, Badminton, and Zumba/Dance Aerobics/Tae-bo

and the like are the most preferred activities of the respondents while three times a week between 4:00-7:00pm is the most preferred time to engage in any physical activity or exercise. It is therefore recommended that University create a unit/department responsible for designing an appropriate health-related and skill-related development program for their faculty members and employees. The same unit shall also be in-charge of overseeing the implementation of the program and would monitor the progress of its clients (thru Individual Transition Fitness Plan). Also, the researchers recommend the initial conduct of a One-Year Fitness Program that will be exclusive for faculty and employees prioritizing those who have been found to be at health risks.

## 5. REFERENCES

- Andersen, C. H., Andersen, L. L., Gram, B., Pedersen, M. T., Mortensen, O. S., Zebis, M. K., & Sjøgaard, G. (2012). Influence of frequency and duration of strength training for effective management of neck and shoulder pain: a randomised controlled trial. *British Journal of Sports Medicine*, 46(14), 1004-1010.
- Dunstan, D. W., Howard, B., Healy, G. N., & Owen, N. (2012). Too much sitting—a health hazard. *Diabetes Research and Clinical Practice*, 97(3), 368-376.
- Chen, C., Tsai, L. T., Lin, C. F., Huang, C. C., Chang, Y. T., Chen, R. Y., & Lyu, S. Y. (2017). Factors influencing interest in recreational sports participation and its rural-urban disparity. *PLoS one*, 12(5), e0178052.
- Cheung, B. M., & Li, C. (2012). Diabetes and hypertension: is there a common metabolic pathway? *Current Atherosclerosis Reports*, 14(2), 160-166.
- Firth-Cozens, J., & Cornwell, J. (2009). *The Point of Care: Enabling compassionate care in acute hospital settings*. April, London: The King's Fund.
- Hirvensalo, M., & Lintunen, T. (2011). Life-course perspective for physical activity and sports participation. *European Review of Aging and Physical Activity*, 8(1), 13.
- Hoeger, W. W., & Hoeger, S. A. (2013). *Principles and labs for physical fitness*. Cengage Learning.
- Hoeger, W. W., & Hoeger, S. A. (2015). *Principles and labs for fitness and wellness*. Cengage Learning.
- Huxley, R., Mendis, S., Zheleznyakov, E., Reddy, S., & Chan, J. (2010). Body mass index, waist circumference and waist: hip ratio as predictors of cardiovascular risk - a review of the literature. *European Journal of Clinical Nutrition*, 64(1), 16.
- Islam, S. M. S., Purnat, T. D., Phuong, N. T. A., Mwingira, U., Schacht, K., & Fröschl, G. (2014). Non-Communicable Diseases (NCDs) in developing countries: a symposium report. *Globalization and health*, 10(1), 81.
- Juntaping, K., Chittawatanarat, K., Prasitwattanaseree, S., Chaijaruwanich, J., & Traisathit, P. (2017). Relationship between height-weight difference index and body-fat percentage estimated by bioelectrical impedance analysis in Thai adults. *The Scientific World Journal*, 2017.
- Kara, F., & Demirci, A. (2010). An assessment of outdoor recreational behaviors and preferences of the residents in Istanbul. *Scientific Research and Essays*, 5(1), 093-104.
- Kim, J. Y., Han, S. H., & Yang, B. M. (2013). Implication of high-body-fat percentage on cardiometabolic risk in middle-aged, healthy, normal-weight adults. *Obesity*, 21(8), 1571-1577.
- León-Latre, M., Moreno-Franco, B., Andrés-Esteban, E. M., Ledesma, M., Laclaustra, M., Alcalde, V., ... & Casasnovas, J. A. (2014). Sedentary lifestyle and its relation to cardiovascular risk factors, insulin resistance and inflammatory profile. *Revista Española de Cardiología*, 67(6), 449-455.
- Non-Communicable Diseases. World Health Organization. <http://www.who.int/mediacentre/factsheets/fs355/en/> Retrieved: January 24, 2018
- Qiao, Q., & Nyamdorj, R. (2010). The optimal cutoff values and their performance of waist circumference and waist-to-hip ratio for diagnosing type II diabetes. *European Journal of Clinical Nutrition*, 64(1), 23.
- Senekal, M., Seme, Z., de Villiers, A., & Steyn, N. P. (2015). Health status of primary school educators in low socio-economic areas in South Africa. *BMC Public Health*, 15(1), 186.
- Suchomel, T. J., Nimphius, S., & Stone, M. H. (2016). The importance of muscular strength in athletic performance. *Sports Medicine*, 46(10), 1419-1449.
- Top 10 causes of death. World Health Organization. <http://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death>
- Waterworth, S. (2014). *Hamstring flexibility: Measurement, stretching and injury susceptibility* (Doctoral dissertation, University of Pretoria).
- Wright, K., Sweet, P., Ascott, N., Chummun, H., & Taylor, J. (2011). Managing common symptoms of long-term conditions. *Long-Term Conditions*, 135.