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Health Challenges for Non-Communicable Diseases among Faculty, Staff, and Administrators in Selected Higher Educational Institutions

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Abstract

This descriptive-comparative study aimed to assess health challenges for Non-Communicable Diseases (NCD) among faculty, staff, and administrators in Higher Educational Institutions (HEI). Health profiling of 741 faculty, staff, and administrators as study respondents in their respective universities was measured using a survey questionnaire from the summer of 2015 to 1st semester of the academic year 2015-2016. World Health Organization (WHO) STEPWISE Approach- Risk Assessment Tool revealed that respondents were all at risk for developing cardiovascular diseases, diabetes, cancer, and chronic respiratory diseases. The research hypotheses showed a significant difference in risk factors between faculty and staff and between administrators and staff. However, no significant difference existed between the group of faculty and administrators.

Keywords: *Health, Challenges, Non-communicable diseases, Higher educational institutions, Faculty, Staff, Administrators*

1. Introduction

Every country in the world is currently facing the burden and battle of combating the epidemic of Non-Communicable Diseases (NCD), which is locally and globally considered a significant threat to public health [1][2][3][4]. As to what extent these are attended is now put into the challenge with the most productive members of the society among Higher Educational Institutions (HEI) were assessed of their health challenges and health promotion action areas [5][2] Health profiling yielded those health challenges for NCD among the three groups of respondents and established the significant difference between these group of faculty, staff, and administrators. Consequently, the study's findings serve as a springboard for future studies that require specific actions for setting the basic foundation in illness prevention and areas for health promotion.

2. Study goal

This study aimed to determine and assess health challenges for NCD among faculty members, staff, and administrators in selected HEIs. It further investigated the significant difference among the respondents' health challenges. Specifically, it sought to answer the

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questions that determined the profile of the respondents in terms of the following health risk factors classified into non-modifiable, such as age and gender, as well as adjustable ones. Those modifiable risk factors included Body Mass Index (BMI), Blood Pressure (BP), personal history of hypertension, diabetes, increase of cholesterol, smoking history, alcohol drinking history, diet, physical activity, and medications taken for cholesterol, hypertension, and blood sugar. The other questions assessed the health challenges that can be identified based on the respondent's health profile. Finally, a significant difference was established among the faculty, staff, and administrators regarding their health challenges as they were grouped according to their health profiles.

3. Method

This paper was a descriptive comparative study that examined the health challenges for Non-Communicable Diseases (NCD) among faculty, staff, and administrators in six HEIs. The study's respondents comprised faculty members, administrative staff, and administrators who belonged to the U-belt Consortium in the City of Manila. In the Philippines, this U-belt Consortium is an association of Manila's leading HEI, which consists of 13 member institutions of which six (6) universities formally expressed their interest and participation in the study.

All 1,200 respondents who were presently employed during the study automatically became the respondents where survey questionnaires were distributed. There were 820 forms retrieved from the six schools. However, 741 questionnaires were considered because other questionnaires needed complete answers and were disregarded.

The primary instrument to gather data covered the respondents' health profiles, which sought to determine the health challenges. For this purpose, the WHO STEPWISE Approach module was utilized to determine the health risks of the respondents in terms of the eleven risk factors as previously indicated. Findings from the study tools were tabulated, analyzed, interpreted, and presented using the Statistical Package for the Social Sciences (SPSS).

4. Results and discussion

4.1. General information on the respondents' health profile assessment

The respondents' health profiling revealed that the majority of those who belonged to this group were female, young adult members of the academic community who were considered overweight, obese, or pre-hypertensive. The majority preferred the intake of processed and fast foods several times a week. In their daily food regimen, consumption of fruits and vegetables of less than five servings a day was noted. They did not engage in moderate to intense physical activity as well. Those respondents with a known history of medical conditions like hypertension, diabetes, and an increase in blood cholesterol were taking prescribed medications from their respective physicians.

4.2. Respondents’ health challenges based on the health profile variables

Based on the health profile assessment of the respondents, all were identified as at risk for NCD, particularly cardiovascular disorders, diabetes, cancer, and chronic obstructive pulmonary disease (COPD), with an average of 3-6 risk factors that the respondents would have failed.

Recent statistics and reports, both locally and globally, have shown that the leading causes of mortality and morbidity are no longer infectious diseases but more chronic, debilitating NCDs, which include heart diseases, diabetes, cancer, and COPD. These NCDs are known as "lifestyle diseases" because the social environment in which the individual lives plays a significant role in determining the person's level of health. Establishing environments conducive to healthy living creates the big challenge of maintaining good nutrition, physical activity, and a healthy way of living [2][3][4][5].

4.3. Respondent's number of risk factors classified according to with or without modifiable risk factors

Table 1. Frequency and percentage distribution of the respondents' number of risk factors classified according to with or without modifiable risk factors

Number of Risk Factors	*With Modifiable Risk Factors		**Without Modifiable Risk Factors		Total
	Frequency	Percentage	Frequency	Percentage	
1	3	0.40	0	0	3
2	29	3.91	0	0	29
3	137	18.49	0	0	137
4	177	23.89	0	0	177
5	171	23.08	0	0	171
6	129	17.41	0	0	129
7	68	9.18	0	0	68
8	21	2.83	0	0	21
9	4	0.54	0	0	4
10	2	0.27	0	0	2
Total	741	100	0	0	741

*Legend: * With Modifiable Risk Factors (MRF)-factors that can still be modified by engaging in healthy lifestyle behaviors*
***Without Modifiable Risk Factors (Non-MRF), factors that cannot be changed, like age and gender*

Out of the 741 respondents, all have at least one (1) modifiable risk factor identified in their health profile. [Table 1] further showed that 177 respondents have four (4) risk factors, wherein the respondents have at least one modifiable risk factor out of the four (4) risk factors identified. Most respondents have 3-6 of these modifiable risk factors assessed in their health profile. These findings reveal that all of the respondents with at least one (1) modifiable risk factor can still be helped by a health/wellness program to reduce their risks of further developing any NCD of the heart, vascular system, respiratory system, and all sorts of cancer.

Based on a study conducted by S. Peterson, V. Peto, P. Scarborough, and M. Rayner (2006), it was emphasized that evidence accumulated during the last few years had identified several factors contributing to the risk of coronary heart disease, including increasing age, a family history of heart disease and male (gender) which will predispose a person for having any of the NCD in the long run [6][7]. Other risk factors for coronary heart disease can be changed depending on a person's lifestyle. Otherwise, these risk factors are precursors for higher-than-average mortality and morbidity rates [8].

4.4. Significant difference among respondents' health challenges

It could be noted from [Table 2] that the respondents had significant differences established in their assessed modifiable risk factors (MRF) and health challenges, hence

rejecting the null hypothesis. The respondents may vary regarding the total risks acquired out of the eleven (11) risk factors identified in their health profile and the Modifiable Risk Factors (MRF), which can further be classified as standard and intermediate. Common MRF of chronic or persistent and long-lasting NCD pertains to unhealthy diet, physical inactivity, tobacco and alcohol use, age, and heredity. In contrast, the intermediate MRF includes raised blood sugar, raised blood pressure, abnormal blood lipids, and overweight/obesity [8]. Other disease precursors include demographic variables, certain individual behaviors, family and individual histories, and specific physiologic changes occurring in the ordinary and healthy functioning of the body [8].

Table 2. Welch's test of difference among respondents' health challenges

	Welch	df1	df2	p-value	Interpretation	Decision on Ho
Modifiable Risk Factors	7.123	2	152.881	.001	Significant	Rejected

As gleaned from the results of the study's findings, the respondents of the study, when grouped accordingly, have significant differences in the identified risk factors classified as modifiable risk factors. Specifically, the group of respondents differs in the number of modifiable risk factors that they have. All of them have at least one modifiable risk factor assessed.

Suppose a person, therefore, is already at risk because of the presence of at least one of these risk factors. In that case, an individual's decision to participate and commit oneself is critical, and strategies to prevent the so-called lifestyle-related diseases can offer a logical alternative for a person. In this regard, the environment in which the individual works will be crucial. Each of the health-promoting lifestyles can be affected by the environment in itself. However, aggressive lifestyle modification is needed for people with existing non-modifiable risk factors and any of the modifiable risk factors.

Table 3. Dunnet C multiple tests of differences in the three groups of respondents in terms of the health challenges

(I) type	(J) type	Mean Difference (I-J)	Interpretation	Decision on Ho
Faculty	Staff	.367*	Significant	Rejected
	Administrator	-0.163	Not Significant	Accepted
Staff	Administrator	-.530*	Significant	Rejected

Furthermore, [Table 3] depicts the test results of differences in the three (3) respondent groups regarding their health challenges. As illustrated, significant differences existed between the faculty and staff, with a mean difference of .367 results, and between staff and administrators, with a mean difference of -0.530 results; hence, rejection of the null hypothesis was considered. On the other hand, no significant difference in the modifiable risk factors and health challenges existed between the group of faculty and administrators with a mean difference of -0.163 results, hence, acceptance of the null hypothesis.

These study findings, as depicted in Table 3, imply that the group of faculty respondents has more significant risk factors compared to the staff and administrators, whereas the staff has lesser risks compared to the faculty and administrators. This is likely attributed to the fact that the group of staff belonged to a younger group of the population and that years of environmental exposure counted as the possibility of more modifiable risk factors accumulating over time.

Additionally, the respondents' job nature can be considered, wherein work-related stress can become a disease-promoting agent. In general, stress has been identified as a risk factor for hypertension, diabetes, upper extremity musculoskeletal back problems, and cardiovascular disease [9]. It can also be attributed to external factors that include the physical environment where job, relationships with others, home, and all the daily situations, challenges, difficulties, and expectations are part of, how the body's ability to respond to and deal with these external stressors cover the other internal factors of stress [9]. Specifically in this study, the nature of the respondents' work as vulnerable risk groups can threaten the health of individual workers and, in turn, the organization in particular.

Based on personal observations and professional experiences as one of the faculty members and clinical instructor in the undergraduate and postgraduate courses and a former administrator in a College of Nursing, teachers' work days do not end when leaving the classroom or hospital premises. Extra things must be done, such as making learning plans, preparing for classroom activities, regular or periodic examinations, grading tests, and reviewing tools for Related Learning Experience in the clinical area of assignments.

5. Conclusion

Based on the findings mentioned earlier in the study, the following conclusions were derived:

(1) The faculty, staff, and administrators in the selected HEI were all identified as at risk for developing NCD, with an average of 4-5 risk factors that the respondents would have failed.

(2) There was a significant difference between faculty and staff and between administrators and staff in the risk factors and non-modifiable risk factors as a result of the study's findings. However, no significant difference existed between the group of faculty and administrators

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References

[1] Department of Health Republic of the Philippines, Health Beat, Official Publication of the Department of Health, vol.64, **(2011)**

[2] WHO The Ottawa Charter for Health Promotion, Geneva: WHO, www.who.int/health-pro-mo-tion/con-ferences/previous/ottawa.../index1.ht, **(2010)**

[3] Department of Health, Morbidity: 10 Leading Causes, Number and Rate 2010, http://www.doh.gov.ph/kp/sta-tistics/morbidity.html, **(2010)**

[4] W. H. O., "Global action plan for the prevention and control of non-communicable diseases 2013-2020," Geneva: WHO, **(2013)**

[5] WHO STEPWISE Approach, "Risk factor's assessment and screening procedures - Module 2, A training manual for health workers on healthy lifestyle: An approach for the prevention and control of non-communicable diseases," www.wpro.who.int/philippines/publications/module2.pdf, **(2010)**

[6] R. Langford, C. P. Bonell, H. E. Jones, T. Pouliou, S. M. Murphy, E. Waters, K. A. Komro, L. Gibbs, D. Magnus, and R. Campbell, "The WHO Health Promoting School framework for improving the health and well-being of students and their academic achievement," Cochrane Database of Systematic, no.CD008958, **(2014)** DOI:10.1002/14651858.CD008958

[7] S. Peterson, V. Peto, P. Scarborough, and M. Rayne, "Coronary heart disease statistics - 2005 edition," British Heart Foundation Health Promotion Research Group, Department of Public Health, University of Oxford, **(2006)**

[8] T.M. Usman, "Modifying health risk factors DOH center for health development," Autonomous Region in Muslim Mindanao, vol.68, **(2012)**

[9] M.C. Stoppler, Stress, Medicine Net.com, http://www.medicinenet.com/ stress/article.htm, **(2014)**

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