

Hypertension Prevalence, Knowledge, Attitude and Health Practices Among Employees of a Wellness Village: Basis for a Proposed Hypertension-Prevention Program

Yabut, Joraleen Dion Guevarra
Adventist University of the Philippines, Philippines
iamdiooon@gmail.com

Abstract

Hypertension is known as a silent killer because some people who suffer from it do not know that they have the disease. Globally, approximately 7.5 million deaths occur due to high blood pressure. In the Philippines, hypertension is ranked as number eight and is the leading cause of death among Filipinos. Moreover, 41.3 million employed Filipinos are suffering from this disease. This study aimed to determine the knowledge, attitude, and health practices to prevent hypertension among the employees of a Wellness Village. The study used a quantitative type of research where 30 respondents were surveyed, utilizing a purposive sampling method in the selection of the appropriate respondents. The data were treated statistically with the utilization of frequency-percentage distribution and mean. The results showed that the respondents have very good knowledge (overall % = 72.99%), a fair attitude (mean=2.76), and fair practice (mean=2.37) on hypertension and its lifestyle management. As a result of this study, the researcher created a proposed intervention program for the risk reduction of hypertension among workplace employees.

Keywords: hypertension, employees, knowledge, attitude, practice

INTRODUCTION

Blood pressure is important to live. It moves blood, which supplies nutrients and oxygen through our body. Blood pressure is the force of blood circulating against the artery walls. Although a rise and fall in blood pressure are normal, frequent abnormal variations for a long time can be dangerous or even fatal. According to the World Health Organization (2018), hypertension, or high blood pressure, is a persistent blood pressure of systolic >140mmHg and/or diastolic >90 mmHg. It is a serious medical condition that can increase the risk of heart, brain, kidney, and other diseases.

Hypertension is known as a silent killer because many people are suffering from it without knowing it. A population of 108 million or 45% of adults in the United States has hypertension, and only about 24% with hypertension have their condition under control (Kochanek et al., 2019). Hypertension ranks third, after smoking and diet, as the biggest risk factor for premature death in the UK, and its prevalence continues to rise as the population ages (Harding, 2020).

Globally, approximately 7.5 million deaths occur due to high blood pressure. It is predicted that in 2025, the number of adults with hypertension will shoot up to 1.56 billion (Singh et al., 2017).

For the past decade, hypertension prevalence in the Philippines has progressively increased and continues to be a major health problem.

The Philippine Health Statistics from the Department of Health (2018) presented the ten leading causes of morbidity. Hypertension was second on the list with 637,078 cases and a rate of 602.4 cases per 100,000 population. In the survey of the Philippine Heart Association, hypertension showed to be the highest incidence of cardiovascular diseases (CVD) among hospital-based populations (Sison et al., 2020). The World Health Organization (2018) data source shows that hypertension is ranked number 8 in the leading causes of death in the Philippines, with coronary heart disease and stroke as numbers 1 and 2.

With about 41.3 million Filipinos who are employed in the Philippines (Philippine Statistics Authority, 2020), the workplace offers a good audience for wellness programs for hypertension. Workplace health promotion (WHP) can be an effective means to reduce lifestyle-related health risk factors and promote healthy behaviors among employees focusing on a healthy diet, regular physical activity, stress management, and other lifestyle choices.

Hence, this study was conducted to determine the knowledge, attitude, and health practices to prevent hypertension among the employees of a wellness village. The study results were used to create a proposed intervention program for the risk reduction of hypertension among workplace employees.

METHODOLOGY

Research design

According to the National Institutes of Health (Glasgow et al., 2012), implementation research is “the scientific study of the use of strategies to adopt and integrate evidence-based health interventions into clinical and community settings in order to improve patient outcomes and benefit population health. Implementation research is a multi-method inquiry that uses both quantitative and qualitative data to assess the programs (Hwang et al., 2020). The study will be conducted in two phases and will utilize quantitative and qualitative case study research design. For the first phase, also known as the needs assessment, the study used a self-constructed research questionnaire design to determine the respondents’ demographics, their level of knowledge, attitude, and practice in hypertension and its lifestyle management. The second phase will be based on the results of the questionnaire. The proposed program intervention will focus on qualified participants who are at risk of hypertension and will undergo and attend the 8-week intervention wellness program.

Study respondents

The respondents of this study were randomly sampled from employees of a wellness village in Tagaytay, Philippines. These employees work eight hours a day, sitting in their office chairs (administrators, accountants, sales marketing, reservations) and exposed to a stressful environment because of the fast pace of coming in and out of guests and customers (waiters, front desk officers, housekeeping, spa therapists). Table 1 shows the demographics of the respondents.

The demographic profile of the respondents plays a significant part in their knowledge, attitude, and practice. These are the factors that affect how they understand hypertension, its risk, and management. It guided the researcher to formulate and develop an accurate program intervention for the respondents. Table 1 presents this data.

Table 1: Demographics of the respondents

	N	Mean
Age	30	2.16
Gender	30	0.36
Educational Attainment	30	3.8
Monthly income	30	1.2

Table 1 shows the demographic profile of the respondents according to their age, gender, educational attainment, and monthly income. The majority of the respondents were between 26-35 years old, female. Most of the respondents were high school graduates and are earning below 10,000 pesos per month; their jobs were mostly gardeners, waiters, and spa therapists in the wellness village.

From the results of the questionnaires, qualified participants will be chosen to participate in the wellness prevention program.

Research instrument

A needs assessment questionnaire was used as a survey form for the respondents. The questionnaire has three parts. Part I was designed for the respondent's demographic profiles in terms of age, sex, educational attainment, and monthly income. Part II is for health history questions. Respondents are asked if they have hypertension and how they are managing it, and also if they have access to nearby clinics, gyms, and recreational areas. They were also asked if they have ever participated in a wellness program in their community and if they are willing to participate if ever there will be a program. The last part was composed of 27 research questions that incorporated the concept of knowledge, attitude, and practice with different scale parameters on hypertension among employees of the wellness village. The first scale for knowledge is answered with true or false. The second has a 4 point Likert scale answered with (4) strongly agree, (3) Agree, (2) Disagree, and (1) Strongly disagree, to determine the response of the respondents in terms of attitude. The third part also has a 4 point Likert scale answered with (4) always, (3) often, (2) sometimes, (1) never on questions about their practices when it comes to their lifestyle habits related to hypertension.

Data gathering procedure

A letter of request was sent to the wellness village's HR department to ask permission to conduct a survey with their employees. Once the HR department had approved, a face-to-face survey was conducted with the employees. A cover letter and consent letter were attached together with the questionnaires introducing the researcher and explaining the objective of the study. The researcher made sure that all the respondents gave their consent to participate in the research and explained the parts of the tool. After which, the employees answered the questionnaire. All employees who answered are those that have their duty on the day the questionnaires are given. A

total of 30 questionnaires were gathered, and results were analyzed as a basis for the wellness program proposal.

Data analysis

After the data were encoded, the researcher analyzed the data using SPSS 23 and MS Excel 2016. The data were treated statistically with the utilization of frequency-percentage distribution and mean.

RESULTS AND DISCUSSION

Health history of the employees

Table 2 presents the health history of the employees in relation to hypertension and their access to clinics, gyms, and wellness programs in their community. Nineteen (63.3%) of the respondents said that they do not have hypertension, and the 36.7% who said that they have hypertension have stated that they manage their hypertension through diet (20%), exercise (10%), and medication (6.7%). Most of the respondents (73.3%) have nearby clinics in their area, while only 16.7 % have access to gyms or any recreational area. Only 3 out of the 30 respondents said that they have participated in a wellness program in their community. When asked if they would be willing to participate in a wellness program, 86.7% of the respondents stated that they were willing to participate.

Table 2: Health History of the Respondents

	Yes Frequency	%	No Frequency	%
Do you have hypertension	11	36.7	19	63.3
Hypertension management				
• Diet	6	20		
• Exercise	3	10		
• Medication	2	6.7		
• None				
Are there any nearby clinics in your area?	22	73.3	8	26.7
Do you have access to gyms or any recreational area?	5	16.7	25	83.3
Have you participated in a wellness program in your community?	3	10	27	90
If ever there will be a wellness program in your workplace, are you willing to participate?	26	86.7	4	13.3

Employees' knowledge of hypertension

To determine the level of knowledge towards hypertension, Table 3 showed that overall, 72.99 of the respondents have very good knowledge of hypertension. Results showed that there are more respondents with less knowledge on items 8 (High blood pressure usually does not have any symptoms.) and 10 (Individuals with increased blood pressure can eat salty foods as long as they take their medication regularly). For the rest of the items (1, 2, 3, 4, 5, 6, 7, and 9), most respondents showed that they have the knowledge.

Table 3: Knowledge on Hypertension

	TRUE Frequency	%	FALSE Frequenc y	%	Scale
1. A person is considered to have hypertension if either their systolic blood pressure is 140 or higher or their diastolic is 90 or higher on two separate occasions.	30	100	0	0.0	With knowledge
2. High blood pressure can lead to death.	27	90	3	10	With knowledge
3. The older you are, the less likely you are to have high blood pressure.	3	10	27	90	With knowledge
4. People with hypertension do not need to take medicine if they exercise regularly.	9	30	21	70	With knowledge
5. Uncontrolled high blood pressure puts you at a higher risk for stroke, heart disease, heart attack, and kidney failure.	27	90	3	10	With knowledge
6. Most people with hypertension need more than one kind of medication to control their blood pressure.	18	60	12	40	With knowledge
7. Young people can have high blood pressure too.	23	76.7	7	23.3	With knowledge
8. High blood pressure usually does not have any symptoms.	15	50	15	50	Less knowledgeable
9. Individuals with increased blood pressure must take their medication only when they feel ill	11	36.7	19	63.3	With knowledge
10. Individuals with increased blood pressure can eat salty foods as long as they take their medication regularly.	17	56.7	12	40	Less knowledgeable

Overall: 72.99 Very Good

Legend of Scale: 0%-50.99% = Less knowledgeable; 51%-100% = With Knowledge

Legend of VI: 0%-50.99% = Poor; 51%-100% = Very Good

Employees' attitude on hypertension

Table 4 shows the attitude of the respondents on hypertension and its management. Overall, respondents have a fair attitude (mean 2.76) in hypertension. According to a study (Guidi, 2021), having a positive attitude also inclines us towards taking on new challenges and learning new skills. This means we are more likely to get involved in activities where we are not immediately successful. An individual with a negative attitude generally gives up at the first unsuccessful

attempt – making it difficult to master a new skill. This is important for the wellness program to be successful and to have positive results on the respondents.

Table 4: Attitude of the respondents on hypertension and management

	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)
Blood pressure check is important for the prevention of hypertension.	50.0	30.0	6.7	13.3
It is important to pay attention to the BP measurement when under stress.	43.3	23.3	20.0	13.3
Healthy lifestyle practices are important to manage my blood pressure	40.0	30.0	13.3	16.7
Blood pressure pills should be taken only when prescribed by a doctor	0	50.0	43.3	6.7
Being physically inactive will increase my risk of having hypertension.	6.7	46.7	46.7	
Not smoking and limiting alcohol use can lower the risk of hypertension	13.3	50	33.3	3.3
It is important to watch out for my body weight.	50	20	6.7	23.3

Total Mean Score 2.76 Fair

Legend of Scale: 1-1.74 – Strongly Disagree; 1.75-2.49 – Disagree; 2.50-3.24 – Agree; 3.25-4.00 – Strongly Agree

Legend of VI: 1-1.74 – Poor; 1.75-2.49 Fair; 2.50-3.24 – Good; 3.25-4.00 – Very Good

Employees' practice on hypertension

Table 5 showed the computed mean of 2.37, which pointed out that the respondents have fair practice towards hypertension. Many researchers (Akbarpour et al., 2018) believe that major changes in lifestyle behaviors play an important role in the prevalence of hypertension. Several studies showed that low levels of physical activity, being overweight, malnutrition, and being a smoker could be associated with increased risk for hypertension even in early adulthood prediction of hypertension during adolescence.

Table 5: Lifestyle Practices of the respondents for the past four weeks

	Mean	Standard Deviation	
I eat meals cooked at home	2.66	1.12	Often
I eat fruits with my meal.	2.13	0.77	Sometimes
I eat vegetables with my meal	2.90	0.84	Often
I eat processed foods like chips, canned goods, and/or processed meats.	2.50	0.90	Often
I eat meat (beef, pork, lamb, chicken, turkey)	2.63	0.76	Often
I drink coffee and/or other caffeinated beverages like sodas and energy drinks	2.80	0.88	Often
I smoke cigarettes.	1.66	1.02	Never
I drink alcoholic beverages.	1.46	0.81	Never
I walk around every 2 hours of sitting.	2.76	0.67	Often
I engage myself in aerobic physical activity and other exercises.	2.36	0.61	Sometimes
I get enough sleep (6-8 hours)	2.63	0.85	Often
I monitor my blood pressure.	2.00	0.94	Sometimes

Total Mean Score: 2.37 Fair

Legend of Scale: 1-1.74 – Never; 1.75-2.49 – Sometimes; 2.50-3.24 – Often; 3.25-4.00 – Always

Legend of VI: 1-1.74 – Poor; 1.75-2.49 Fair; 2.50-3.24 – Good; 3.25-4.00 – Very Good

Proposed wellness prevention program

The proposed wellness prevention program was created based on the results of the survey among the wellness village employees. The wellness program aims to reduce the risk of hypertension among the employees and raise the awareness of the employees regarding the risks of hypertension, increase their knowledge, attitude, and skills in the prevention, management, and intervention of hypertension and reduce the risk of hypertension with the use of lifestyle interventions focusing on nutrition and exercise. Employees that would want to participate in this program should at least have one of these lifestyle risk factors of hypertension: overweight, eating an unhealthy diet, and having low physical activity. A health assessment questionnaire will be given to the employees to answer as screening before the wellness intervention begins.

Table 6: WorkWell Intervention Program: a proposed wellness-prevention program

Goal: To reduce the risk of hypertension among the employees						
Objectives	Activities/ Intervention	Persons Involved	Duration	Expected Outputs		
Determine their lifestyle risk factors for hypertension	Health Assessment Questionnaire Blood pressure and BMI check	Researcher, participants	2 days	Participants will be able to identify their lifestyle risk factors for hypertension		
Monitor their blood pressure regularly	Use of sphygmomanometer demonstration Blood pressure record book	Researcher, participants	8 weeks (whole program duration)	Keep a record of their blood pressure. Participants will be knowledgeable in using a sphygmomanometer		
Replace workplace pantry with at least 80% healthy foods	Lecture on heart healthy eating and cooking Pantry inspection	Researcher, participants	2 days	Transformed pantry, promoting healthy foods only.		
Create, prepare, and cook a 3-day heart healthy meal plan	Lesson on Meal Planning and heart-friendly cooking with cooking demonstrations Participants will have a return-demo	Researcher, participants	3 days	Meal Plan Cooking demonstrations of a 3-day heart-friendly meal by employees.		
Achieve or at least commit to achieving their healthy goal	Daily exercise, 10,000 steps monitoring Food Journal Monitoring	Researcher, participants	8 weeks (whole program duration)	Maintained healthy weight and/or weight loss		
Promote healthy lifestyle in the workplace and also to their household		Researcher, participants	lifetime commitment	Practice a healthy lifestyle both in the workplace and household.		

CONCLUSION

Based on the results of the needs assessment, the knowledge, attitude, and practice of the respondents on hypertension and management through lifestyle are very good in terms of knowledge but only fair in terms of their attitude and practice. The WorkWell program aims to provide an intervention for the at-risk participants where they will commit to changes and practice in action the knowledge they have.

Although the results provide insight into the knowledge, practices, and attitude (KAP) of the employees, there are limitations in this study. The survey was limited to one workplace; thus, further research may be conducted to include other workplace areas for better generalizability. Future studies should also employ qualitative research tools to have an in-depth description of the employee's KAP on hypertension.

Acknowledgement

The author would like to thank the Graduate Studies of Public Health at Adventist University of the Philippines for the support in this research endeavor as an output of the practicum requirement in Master of Public Health Lifestyle Medicine and all the employees of the wellness village who took part in this research study.

REFERENCES

- Akbarpour, S., Khalili, D., Zeraati, H., Mansournia, M. A., Ramezankhani, A., & Fotouhi, A. (2018). Healthy lifestyle behaviors and control of hypertension among adult hypertensive patients. *Scientific Reports*, 8(1). <https://doi.org/10.1038/s41598-018-26823-5>
- Department of Health Philippines. (2018). *The 2018 Philippine Health Statistics*. Department of Health Gov PH. <https://doh.gov.ph/node/24432>
- Glasgow, R. E., Vinson, C., Chambers, D., Khoury, M. J., Kaplan, R. M., & Hunter, C. (2012). National Institutes of Health Approaches to Dissemination and Implementation Science: Current and Future Directions. *American Journal of Public Health*, 102(7), 1274–1281. <https://doi.org/10.2105/ajph.2012.300755>
- Guidi, M. (2021, February 7). *5 Scientific Studies that Prove the Power of Positive Thinking*. LinkedIn. <https://www.linkedin.com/pulse/5-scientific-studies-prove-power-positive-thinking-mark-guidi>
- Harding, M. (2020, February 27). *Hypertension*. Patient.Info. <https://patient.info/doctor/hypertension>
- Hwang, S., Birken, S. A., Melvin, C. L., Rohweder, C. L., & Smith, J. D. (2020). Designs and methods for implementation research: Advancing the mission of the CTSA program. *Journal of Clinical and Translational Science*, 4(3), 159–167. <https://doi.org/10.1017/cts.2020.16>
- Kochanek, K. D., Murphy, S. L., Xu, J., & Arias, E. (2019, June). *Deaths: Final Data for 2017* (Vol. 68 No. 9). National vital statistics reports: from the Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System. https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_09-508.pdf
- Philippine Statistics Authority. (2020). *Employment Situation in July 2020 | Philippine Statistics Authority*. <https://psa.gov.ph/content/employment-situation-july-2020>
- Singh, S., Shankar, R., & Singh, G. P. (2017). Prevalence and Associated Risk Factors of Hypertension: A Cross-Sectional Study in Urban Varanasi. *International Journal of Hypertension*, 2017, 1–10. <https://doi.org/10.1155/2017/5491838>

Sison, J., Divinagracia, R., & Nailes, J. (2020). Asian management of hypertension: Current status, home blood pressure, and specific concerns in the Philippines (a country report). *The Journal of Clinical Hypertension*, 22(3), 504–507. <https://doi.org/10.1111/jch.13802>

World Health Organization. (2018). *Hypertension in Philippines*. World Life Expectancy. <https://www.worldlifeexpectancy.com/philippines-hypertension>