



DESCRIPTION OF BLOOD PRESSURE AND HEALTHY LIFESTYLE BEHAVIOR AMONG EMPLOYEES

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ABSTRACT

Productive age workers often experience hypertension due to unhealthy lifestyles. Hypertension is known as "The Silent Killer" because it occurs without symptoms (asymptomatic), thus requiring more attention. The purpose of this study is to identify blood pressure levels and healthy lifestyle behaviors among employees at PT Kinaya Multi Energi. The method used in this research is descriptive quantitative, with the population consisting of employees of PT Kinaya Multi Energi. A total of 52 samples were determined using the total sampling technique. The tools used for hypertension screening were a digital sphygmomanometer and a digital body weight scale. The instrument for measuring healthy lifestyle behaviors was a self-efficacy questionnaire for practicing a healthy lifestyle to prevent hypertension. The data analysis used was descriptive quantitative analysis with frequency distribution and percentage. The result of the study shows that The majority of participants in this study experienced increased blood pressure. Respondents without a history of hypertension were mostly in the prehypertension category (32.6%), while a significant number were classified as having stage 1 hypertension (30.4%), and stage 2 hypertension (6.5%). Among respondents with a history of hypertension, most were categorized as having stage 1 hypertension (50%), with a significant number also classified as experiencing prehypertension and stage 2 hypertension (16.7%). Additionally, the majority of respondents have less healthy lifestyle behaviors (57.7%). In conclusion, most respondents experience hypertension and are unaware of it. In terms of healthy lifestyle behaviors, respondents are indicated to have unhealthy behaviors because out of 6 aspects, only 2 aspect supports a healthy lifestyle. This indicates a lack of awareness regarding personal health conditions among the employees.

Keywords: blood pressure; employees; healthy living behavior

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INTRODUCTION

Cardiovascular diseases such as heart and blood vessel diseases are major problems in both developed and developing countries. One of the cardiovascular diseases that is the leading cause of death worldwide is hypertension (WHO, 2020). A person is said to have hypertension if a sphygmomanometer measurement shows a systolic pressure of ≥ 140 mmHg and/or a diastolic pressure of ≥ 90 mmHg on more than one visit (Kemenkes, 2021). Hypertension, or high blood pressure, is often dubbed "The Silent Killer" because it frequently occurs without any symptoms (asymptomatic), thus requiring attention.

Hypertension is one of the most commonly found catastrophic diseases. Catastrophic diseases are life-threatening, require high treatment costs, involve long processes, and have a high number of sufferers each year. Based on data from the World Health Organization (WHO) in 2015, 1.13 billion people worldwide suffer from hypertension, meaning 1 in 3 people globally has hypertension. According to predictions by the Ministry of Health (Kemenkes) in 2019, the number of people with hypertension is expected to increase to 1.5 billion by 2025, with 9.4 million people dying each year from hypertension and its complications. According to Riskesdas data (2021), the prevalence of hypertension in Indonesia increased from 25.8% in 2013 to 34.1%. According to the West Java Health Office (2020), West Java Province ranked second after South Kalimantan Province, with the prevalence of hypertension rising from 34.5% to 39.6%.

Based on Riskesdas data (2018), the prevalence of hypertension in the productive age group, those over 18 years old, increased to 34.11% compared to the previous year. Riskesdas data (2019) states that the prevalence of hypertension among workers, particularly private employees, is 24.37% nationally. Research by Makalew et al. (2013) revealed that private employees are at the highest risk of hypertension compared to other occupations. Office workers are at risk of hypertension due to long working hours and static positions, such as sitting for extended periods. One cause of hypertension among office workers is prolonged sitting and lack of physical activity (Ofori et al., 2019). According to the Ministry of Health (2018), sitting for too long can potentially increase blood pressure, and there is also the saying "sitting is the new smoking". Among workers of productive age, hypertension can also occur due to unhealthy lifestyles, such as consuming foods high in sodium found in fast food and instant meals (Jingga et al., 2022). The modern lifestyle also contributes to hypertension because of overworking during the productive years, leading to stress, which is often managed by smoking and drinking alcohol (Marlita et al., 2022). If this situation continues, it will result in the emergence of non-communicable diseases, one of the most common being hypertension, and it can even lead to complications and death.

PT Kinaya Multi Energi is a specialized contractor company that undertakes various types of building and industrial projects in the mining sector, primarily handling work in mechanical, electrical, plumbing, and HVAC fields. The company operates daily in office buildings, with most of the time spent sitting, which is one of the causes of hypertension among workers. This type of work requires high concentration due to numerous targets that need to be met in a short time, and there are many competitors in this field. This leads to increased stress experienced by employees, making it a risk factor for hypertension. Due to these tight targets, employees do not have sufficient time for exercise and health check-ups. If this situation continues, it will become a long-term problem and lead to complications such as Coronary Heart Disease (CHD), Stroke, and others. These diseases can increase mortality, disability, and more, thus harming both employees and the company.

PT Kinaya Multi Energi has a mission to provide the best service with a qualified and experienced team. Therefore, the quality of the workers is of utmost importance, as health supports the delivery of high-quality and professional services. If the health of its workers is not maintained, it will impact the quality of service, achievements, and profits of the company. An uncontrolled lifestyle of workers can be a risk factor for hypertension, especially since hypertension occurs without any complaints, thus requiring more attention. Nurses play a significant role in this issue, as they not only work within the hospital setting but also in the workplace as community nurses. Nurses have a major role in creating a healthy community, one aspect of which is enabling the community to control or prevent the onset of

undesirable catastrophic diseases. The community can prevent and control these diseases by adopting a healthy lifestyle and early detection (screening) in an effort to become agents of healthy living.

The purpose of this study is to identify the blood pressure levels and healthy lifestyle behaviors among employees at PT Kinaya Multi Energi. This includes routine blood pressure monitoring, dietary habits, smoking habits, stress management, physical activity, and regular medication intake for those with hypertension. Additionally, the study aims to prevent diseases to minimize the occurrence of new problems resulting from existing illnesses and to improve the quality of life for employees.

METHOD

This research employs a descriptive study design with a quantitative approach. The population of this study includes all employees at PT Kinaya Multi Energi, totaling 55 employees. The sampling technique used in this study is total sampling, where the entire population is taken as the sample, amounting to 55 samples. On the other hand, 3 employees were unwilling to become respondents. Therefore, the sample size in this study is 52 samples. This research has received ethical clearance from the Ethics Committee of 'Aisyiyah University Bandung with the reference number 1007/KEP.01/UNISA-Bandung/VII/2024. The instrument used to collect data on healthy living behavior in this study is a self-efficacy questionnaire for adopting a healthy lifestyle to prevent hypertension, developed by Nuraeni, et al. (2017), consisting of 38 questions. The modification involves changing the explanation from "Berikan tanda checklist (✓) pada pilihan yang sesuai dengan tingkat keyakinan Anda" to "Berikan tanda (✓) pada pilihan yang sesuai dengan kebiasaan Anda" and removing the word "self-efficacy" from the questionnaire. The instrument has been tested for validity and reliability by previous researchers. The validity test results with 24 respondents showed that 18 out of 38 items in the questionnaire had an r-value greater than the critical r-value (0.707), indicating that these 18 items are valid, while 20 items were found to be invalid. For these 20 items, the questionnaire developers improved the sentence structure and conducted a content review on the importance of these items, therefore, these questions were retained. The reliability test results showed a Cronbach's alpha value of 0.747, indicating that the instrument is reliable. The research instruments used in this study include a One Health Automatic Blood Pressure Monitor digital sphygmomanometer, model KF-65A, which has been tested and calibrated with certificate number S-GVN/06-2024/019 to ensure valid, error-free, and reliable results. The type of data analysis used is univariate analysis, and the data will be categorized according to each variable using distribution and percentage.

RESULTS

Table 1, it is known that nearly half of the respondents (38.5%) are in the age range of 26-35 years. The majority of respondents (55.8%) are male. A small portion of the respondents (21.2%) are engineers. It is also known that nearly one-third of the respondents (34.6%) fall into the obesity category. Nearly one-third of the respondents (28.8%) still have a smoking habit. A small portion of the respondents (9.6%) are experiencing stress. A small portion of the respondents (9.6%) have a history of hypertension, and the majority of respondents with a history of hypertension (66.7%) are taking hypertension medication.

Table 1.
Frequency Distribution of Respondent characteristics (n= 52)

Respondent Characteristics	f	%
Age		
16-25	7	13.5
26-35	20	38.5
36-45	10	19.2
46-55	8	15.4
56-65	7	13.5
Gender		
Male	29	55.8
Female	23	44.2
Field of Work		
Engineer	11	21.2
Construction	4	7.7
Purchasing	3	5.8
Procurement	4	7.7
Finance	3	5.8
Drafter	8	15.4
HRD	3	5.8
Admin	7	13.5
Security	2	3.8
Janitor	1	1.9
Driver	2	3.8
Outsourcing	2	3.8
Consultant	2	3.8
BMI		
Underweight	5	9.6
Normal Weight	17	32.7
Overweight	12	23.1
Obesity	18	34.6
Have a Smoking Habit		
Yes	15	28.8
No	37	71.2
Are Feeling Stressed		
Yes	5	9.6
No	47	90.4
Have a History of Hypertension		
Yes	6	9.6
No	46	90.4
Consumption of Hypertension Medication in Hypertension Patients(n=6)		
Yes	4	66.7
No	2	33.3

Table 2.
Frequency Distribution of Blood Pressure Classification (n= 52)

Blood Pressure Classification	Respondents Without a History of Hypertension (n=46)		Respondents With a History of Hypertension (n=6)	
	f	%	f	%
Normal	14	30.4	1	16.7
Prehypertension	15	32.6	1	16.7
Hypertension Stage 1	14	30.4	3	50
Hypertension Stage 2	3	6.5	1	16.7

Table 2, the blood pressure measurement results of respondents without a history of hypertension show that the majority (69.5%) fall into the classifications of prehypertension (32.6%), hypertension stage 1 (30.4%), and hypertension stage 2 (6.5%). Therefore, it can be

concluded that most respondents are unaware of the symptoms of hypertension and the increase in blood pressure. The blood pressure measurement results of respondents with a history of hypertension show that almost all respondents (83.4%) fall into the classifications of prehypertension (16.7%), hypertension stage 1 (50%), and hypertension stage 2 (16.7%). Meanwhile, only a small proportion of respondents (16.7%) have normal blood pressure. This indicates that most respondents still have high blood pressure.

Table 3.
Respondent's Healthy Lifestyle Behavior (n= 52)

Healthy Lifestyle Behavior	Supporting Healthy Lifestyle Behavior		Not Supporting Healthy Lifestyle Behavior	
	f	%	f	%
Conducting a Blood Pressure Check	8	15.4	43	84.6
Regulating Diet	16	30.8	36	69.2
Reducing Smoking Habits (n=15)	2	13.3	13	86.7
Reducing Stress	47	90.4	5	9.6
Exercising	27	51.9	25	48.1
Regular Medication Consumption for Hypertension Patient (n=6)	4	66.7	2	33.3

Table 3, Out of the six aspects measured, only two support healthy lifestyle behaviors, namely the aspect of reducing stress (90.4%) and the aspect of exercising (51.9%). This indicates that more than half of the respondents lack healthy lifestyle behaviors.

Table 4.
Respondent's Category Healthy Lifestyle Behavior (n= 52)

Category	f	%
Healthy Lifestyle Behavior	22	42.3
Unhealthy Lifestyle Behavior	30	57.7

Table 4, the majority of respondents exhibit less healthy lifestyle behaviors (57.7%). Similarly, a significant portion of respondents display healthy lifestyle behaviors (42.3%). This is consistent with Table 4, where only two aspects support healthy lifestyle behaviors among respondents.

DISCUSSION

Description of Blood Pressure

The majority of respondents in this study experienced elevated blood pressure, with most falling into the prehypertension category, while a significant number were classified as having stage 1 and stage 2 hypertension. This indicates that elevated blood pressure is a common health issue among the respondents. Only a small number of respondents are aware that they suffer from hypertension. Many respondents without a history of hypertension are unaware that they have experienced a significant increase in blood pressure. Many hypertension sufferers in Indonesia are unaware of their condition because the symptoms often go unnoticed. As a result, hypertension is frequently called "The Silent Killer" since it typically occurs without any obvious symptoms (asymptomatic) (Khasanah, D.N., 2022). Among respondents with a history of hypertension, only a small number have normal blood pressure. This may be caused by inconsistent medication adherence, irregular blood pressure monitoring, an unhealthy lifestyle, lack of physical activity, and stress (AHA, 2024). A contributing factor to the low awareness of the need for blood pressure checks is the lack of noticeable symptoms, which often leads individuals to perceive themselves as healthy and not in need of medication, as Sari (2021) points out. Awareness of hypertension is crucial because, without early detection and proper management, the risk of serious complications increases. Individuals who are unaware of their condition may not take the necessary steps to

control their blood pressure, which can lead to long-term health problems such as heart disease and stroke. Therefore, it is essential to enhance awareness and prevention of hypertension.

Healthy Lifestyle Behavior

Healthy living behavior encompasses actions related to an individual's efforts to maintain and enhance their health. From a non-pharmacological perspective, healthy living behavior has been proven to reduce blood pressure and is generally very beneficial in lowering the risk of cardiovascular problems. It also affects an individual's productivity, especially among employees. According to findings, the majority of employees exhibit less healthy lifestyle behaviors (42.3%). Only two aspects support healthy living behaviors, namely reducing stress (90.4%) and exercising (51.9%), and these need to be maintained. Other aspects that are not yet met must be improved because healthy living is crucial for individuals. Respondents' awareness of healthy living behaviors by measuring blood pressure is still lacking, which may be due to working individuals having little time and opportunity to check their health (Idrus et al., 2021). Prevention and management of high blood pressure can be achieved through regular blood pressure checks (AHA, 2020).

Poor eating habits also affect blood pressure. Most respondents still struggle to reduce salt and instant food intake. According to the Indonesian Ministry of Health's recommendation in 2023, salt intake should not exceed 2 grams per day. This is because salty foods contain high levels of sodium, which binds more fluid circulating with the blood to the heart. This condition puts pressure on the heart and can increase blood pressure (Yunus et al., 2021). This is compounded by the fact that more than half of the respondents have a BMI indicating overweight or obesity. This finding is concerning as there is a known correlation between obesity and hypertension, highlighted in the research by Gunawan and Adriani (2020). Obesity is a primary risk factor for hypertension, increasing the likelihood of developing this condition by threefold, as documented by Faisal et al. (2022). Therefore, to avoid hypertension, efforts and awareness to maintain a proper diet are necessary. In this study, it was noted that a considerable number of participants were obese.

Smoking habits can also cause high blood pressure because the chemicals in cigarettes, especially nicotine, can stimulate the sympathetic nerves making the heart work faster, causing blood to circulate quickly and blood vessels to constrict (Umbas, et al., 2019). Most respondents who smoke have not yet been able to quit smoking because the addictive nature of cigarettes causes smokers to become addicted (Khairani et al., 2019). A small portion of respondents with a history of hypertension do not regularly take their medication. This may be because they no longer feel the symptoms of hypertension and feel healthy, even though antihypertensive drugs should be taken for life to prevent complications (Wirakhmi et al., 2021). This does not support healthy living behavior and needs greater attention. To maintain normal blood pressure and avoid complications, individuals with hypertension should adhere to prescribed medication regimens consistently, as recommended by Pramana et al. in 2019.

Awareness of healthy living behavior can be enhanced through health promotion and disease prevention programs. A theoretical model that can be utilized is the Health Belief Model. Perceptions in the HBM theory are crucial in preventive efforts against hypertension. Research by Imitichan, et al., in 2019 stated that healthy living behavior in the prevention of hypertension is directly influenced by perceptions in the HBM theory. One perception that significantly affects behavior change is self-efficacy perception. If a person believes that a new behavior is beneficial for them, but they think they are incapable of implementing it, then

they will not attempt to adopt the new behavior (Salihat, 2009). This aligns with findings from Berhimpong et al., 2020, which indicate that healthcare professionals believe that awareness of disease risks negatively impacting their health motivates individuals to engage in behaviors that enhance their health. Thus, efforts that can be undertaken to facilitate behavior change include health promotion activities, which are part of the nurse's role as a health educator in disease prevention aimed at minimizing the occurrence of new issues as consequences of existing diseases and to enhance the quality of life for employees.

CONCLUSION

The majority of respondents fall into the categories of prehypertension, hypertension stage 1, and hypertension stage 2, and are unaware of their elevated blood pressure or hypertension. This indicates a lack of awareness regarding personal health conditions among the employees. In terms of healthy lifestyle behaviors, of the six identified aspects, only stress management and physical activity aspect supports healthy lifestyle behavior. The other aspects are lacking, particularly in smoking habits, irregular blood pressure monitoring, poor dietary habits, and hypertension medication consumption. Therefore, efforts to raise awareness and provide health education are needed to encourage behavior changes towards healthier practices, in order to reduce the risk of hypertension-related complications.

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