



Analysis Of Risk Factors HL. Blum In Hypertension Patients

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ABSTRACT

High Blood Pressure (hypertension) is an increase in blood pressure in the arteries. In general, hypertension is a condition without symptoms, where the abnormally high pressure in the arteries increases the risk of stroke, aneurysm, heart failure, heart attack and kidney damage. Blood pressure testing will get two numbers. A higher number is obtained when

the heart contracts (systolic), a lower number is obtained when the heart relaxes (diastolic). Blood pressure is written as the systolic pressure of the diastolic pressure slash, for example 120/80 mmHg. The research approach was analytic observational with the number of respondents 109 people. The use of instruments is an application of the HL theory. The variables studied were age, gender, marital status, family history, obesity, consumption of junk food, consumption of soft drinks, smoking habits, coffee consumption and physical activity. Primary data analysis performed HL factor analysis. Primary hypertension is found in more than 90% of hypertensive patients, while the remaining 10% is caused by secondary hypertension. Although the cause of primary hypertension is not known with certainty, research data have found several factors that often cause hypertension.

Keywords: Hypertension, HL Blum

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INTRODUCTION

Hypertension is a chronic condition characterized by an increase in systolic blood pressure of about 140 mmHg or a diastolic pressure of about 90 mmHg. This condition causes the heart to work harder to circulate blood throughout the body through the blood vessels. Hypertension is a problem that needs to be watched out for, because there are no specific symptoms of hypertension and some people still feel healthy to do their usual activities. This is what makes hypertension a silent killer, people will realize that they have hypertension when the symptoms are getting worse and go to health services. (Tim Bumi Medika, 2017)

2015 WHO data shows that about 1.13 billion people in the world suffer from hypertension, which means that 1 in 3 people in the world are diagnosed with hypertension. It is also estimated that every year 9.4 million people die from hypertension and complications. Hypertension in Asia was recorded at 38.4 million in 2000 and is predicted to increase to 67.4 million in 2025. Hypertension in Southeast Asia itself is a major health risk factor. Each year hypertension kills 2.5 million people in Southeast Asia (Masriadi, 2016). Based on 2018 Riskesdas data, the prevalence of hypertension has increased by 8.31%, from the previous 25.8% (Riskesdas, 2013) to 34.11% (Riskesdas, 2018). Hypertension is also one of the 10 highest risk factors for death and disability in Indonesia (Kementrian Kesehatan Republik Indonesia, 2018)

Hypertension that is not controlled or that is persistently high for a long time will cause complications. Complications triggered by hypertension, namely stroke, heart attack, heart failure and chronic renal failure. To minimize complications, proper management of the disease is needed. However, with the current pandemic conditions causing hypertension treatment to be hampered due to the limited space for the community to obtain health services (Levine and Secrets, 2014)

Currently, Indonesia is experiencing a change in disease patterns, which is often referred to as an epidemiological transition, marked by an increase in mortality and morbidity due to non-communicable diseases, one of which is hypertension. The impact of the increase in the incidence of non-communicable diseases is the increase in health service financing that must be borne by the public and the government; decreased community productivity; decreasing state competitiveness which ultimately affects the socio-economic conditions of the community itself.

HL Blum (1908) has identified that the degree of public health is influenced by 4 factors, namely behavior, environment, health services and heredity. Behavioral and environmental factors play a role for more than 75% of the public health status. Environmental improvement and behavior change towards a healthier one need to be carried out systematically and planned by all components of the nation; for this reason, the Healthy Living Community Movement is an option in realizing a better degree of public health.



METHOD

Research design with analytic observational perspective analysis of a selected disease. In determining the sample using Simple Random Sampling technique with a number of respondents 109 people. Each member will search for a minimum of 8 respondents in each respective region. The use of instruments is an application of the HL theory. The variables studied were age, gender, marital status, family history, obesity, consumption of junk food, consumption of soft drinks, smoking habits, coffee consumption and physical activity. Primary data analysis performed HL factor analysis.

RESEARCH RESULT

Based on the Ministry of Health of the Republic of Indonesia, there are 10 diseases that were analyzed by the Hanlon method. Qualitative USG, Urgency (How urgent the problem needs to be resolved is related to time); Seriousness (How big the problem needs to be discussed in relation to the consequences that arise); Growth (How likely the problem is to develop is associated with possible causes that get worse if left unchecked. And this value is based on the average group discussion, then one priority problem is obtained based on the highest score, namely hypertension.

Table 1 Priority problems

No	Disease	U	S	G	Total	Rank
1	Hypertension	4.266667	4.333333	4.466667	13.06667	1
2	TB	3.466667	3.333333	3.466667	10.26667	2
3	LBP	3	2.733333	2.733333	8.466667	9
4	DM	3.533333	3.4	3.2	10.13333	3
5	Malnutrition	3	2.933333	2.866667	8.8	6
6	Obesity	2.933333	2.933333	2.733333	8.6	8
7	Kidney disorders	3.133333	3.2	3.133333	9.466667	4
8	Headache	2.6	2.466667	2.533333	7.6	10
9	Anemia	2.933333	2.933333	2.8	8.666667	7
10	COPD	2.866667	3.066667	3	8.933333	5



1. Identity

Table 2 Distribution of Respondents by Identity

Category	Frequency (N=127)	Percentage (%)
Gender		
Man	64	50,4
Women	63	49,6
Profession		
Labor	14	11,0
DPU	1	0,8
Housewife	28	22,0
College student	1	0,8
Traders	5	3,9
Pension	7	5,5
Retired	1	0,8
Farmer	11	8,7
Government employees	25	19,7
Police	1	0,8
entrepreneur	33	26,0
Hypertension category		
Hypertension	108	85,0
Normal	19	15,0
IMT		
Less	10	7,9
Normal	32	25,2
Overweight	28	22,0
Obesity	52	40,9
Duration of diagnosis		
<10 years	108	85,8
≥10 years	18	14,2



Based on table 2, data analysis based on gender data, the majority of hypertensive sufferers occur in men with a presentation of 64 respondents (50.4%) and women as many as 63 respondents (49.6%). Meanwhile, based on the type of work, most of the hypertension sufferers were mostly self-employed with a presentation of 33 respondents (26%). Most of the patients suffering from hypertension have a body mass index (BMI) in the obesity category with a presentation of 52 respondents (40.9%) and suffer from less than 10 years with a presentation of 18 respondents (85.8%).

2. Genetic / Hereditary Factors

Table 3 Genetic / hereditary factors

Category	Frequency	Percentage (%)
There is	92	72,6
Not	35	27,6
Total	127	100,0

Based on table 3 above, it can be seen that out of 127 samples, 92 people (72.6%) had a family history of hypertension, and 35 (27.6%) did not have hypertension offspring.

3. Behavior

Table 4 Distribution of Respondents' Behavioral Factors

Category	Frequency (N=127)	Percentage (%)
Eat junk food		
Not	26	20,5
Rarely <2x / week	81	63,8
Often > 2x / week	20	15,7
Consume soft drinks		
Not	55	43,3
Rarely <2x / week	63	49,6
Often > 2x / week	9	7,1
Diet salt intake		
Not	70	55,1
Yes	57	44,9
Consume coffee		



Not	69	54,3
Rarely <2 cups / day	45	35,4
Often > 2 cups / day	13	10,2
Smoking habit		
Routine smoking > 1 pack / day	18	14,2
Smoking rarely <1 pack / day	14	11,0
Have quit smoking > 6 months	14	11,0
Not a smoker	81	63,8
Eat fatty foods		
Never	4	3,1
Rarely	87	68,5
Often	36	28,3
Eat fiber		
Never	2	1,6
Rarely	69	54,3
Often	56	44,1
Physical Activity		
Less	112	88,8
Good	15	11,8

Based on table 4, it is found that of the 127 respondents, the most with the distribution of respondents based on junk food consumption is the most in the rare category or <2x / week as many as 81 respondents (63.8%). The distribution of respondents based on the category of most soft drink consumption was in the rare category or <2x / week as many as 63 respondents (49.6%). The highest category of salt diet consumption was not as many as 70 respondents (55.1%). The distribution of respondents based on the highest coffee consumption category in the never category was 69 respondents (54.3%). The distribution of respondents based on smoking habits, most respondents were non-smokers, as many as 81 respondents (63.8). The distribution based on the consumption of fatty foods, the most



respondents were in the rare category, as many as 87 respondents (68.5%). The distribution of respondents based on fiber consumption in the rare category was 69 respondents (54.3%). For the distribution of respondents based on physical activity, the most were in the poor category of 112 respondents (88.8%).

4. Environment

Table 5, the distribution of respondents based on environmental factors

Category	Frequency (N=127)	Percentage (%)
Home environment		
Dense population	55	43,3
Not densely populated	72	56,7
Residence conditions		
Rural	99	78,0
Urban	27	21,0
Source of clean water		
There is	127	100,0
Hand washing facilities		
Nothing	15	11,8
There is	112	88,8

Based on table 5 above, it can be seen that the characteristics of respondents based on the home environment indicate that 56.7% of respondents are in a home environment that is not densely populated, and the remaining 43.3% of respondents are in a densely populated home environment. Characteristics of respondents based on living conditions indicate that 78.0% of respondents are in rural areas, and the remaining 21.3% of respondents are in urban areas. Characteristics of respondents based on clean water sources indicate that all respondents (100%) have good sources of clean water. Characteristics of respondents based on washing hands show that 88.8% of respondents have a place to wash their hands, and 11.8% of respondents do not have a place to wash their hands.



5. Health Facilities

Table 6 Distribution of Respondents based on Health Failure Service Factors

Category	Frequency (N=127)	Percentage (%)
Distance to health facilities		
Close	75	59,1
Moderate	48	37,8
Far	4	3,1
The nearest health facility service		
Independent medical clinic / practice	77	60,6
Community Health centers	38	29,9
Hospital	12	9,4
Periodic health check		
Never	13	10,2
Rarely	84	66,1
Routine	13	23,6
Critical Illness Management Program Membership		
No	97	76,4
Yes	30	23,6
History of getting hypertension counseling		
No	55	43,3
Yes	72	56,7
Often	36	28,3
History of traditional medicine		
No	74	58,3
Sometimes	31	24,4
Yes	22	17,3
Standby ambulance access		



Nothing	0,8	0,8
Do not know	37	29,1
Yes, but don't know how to access it	67	52,8
There, know how to access it	22	17,3
Access home visit		
No	108	85,0
Yes	19	15,0

Based on table 6, the distribution of the distance between health facilities and houses in the most close category is 75 respondents (59.1%). The distribution based on the type of closest health facility was an independent clinic / doctor's practice, as many as 77 respondents (60.6%). The distribution for the category of periodic health checks was mostly in the rare category as many as 84 respondents (66.1%). Based on the distribution of respondents, the most membership categories of the Assistant Midwife Post were not participating in membership as many as 97 respondents (76.4%). The distribution of respondents for the highest history of hypertension counseling had received counseling as many as 72 respondents (56.7%). The spread of respondents for the history of traditional medicine, most of the respondents did not use traditional medicine, as many as 74 people (58.3%). The distribution of respondents based on standby ambulance access, most of the 67 respondents (52.8%) knew that there was access to a standby ambulance but did not know how to access it. The distribution of respondents based on the history of home visit service as many as 108 (85%) of the 127 respondents admitted that they never had access to a home visit.

DISCUSSION

Based on questionnaires related to hypertension that have been distributed through google forms, 127 respondents met the inclusion criteria. The results of the analysis using the HL Bloom method are as follows:

1. Fishbone analysis

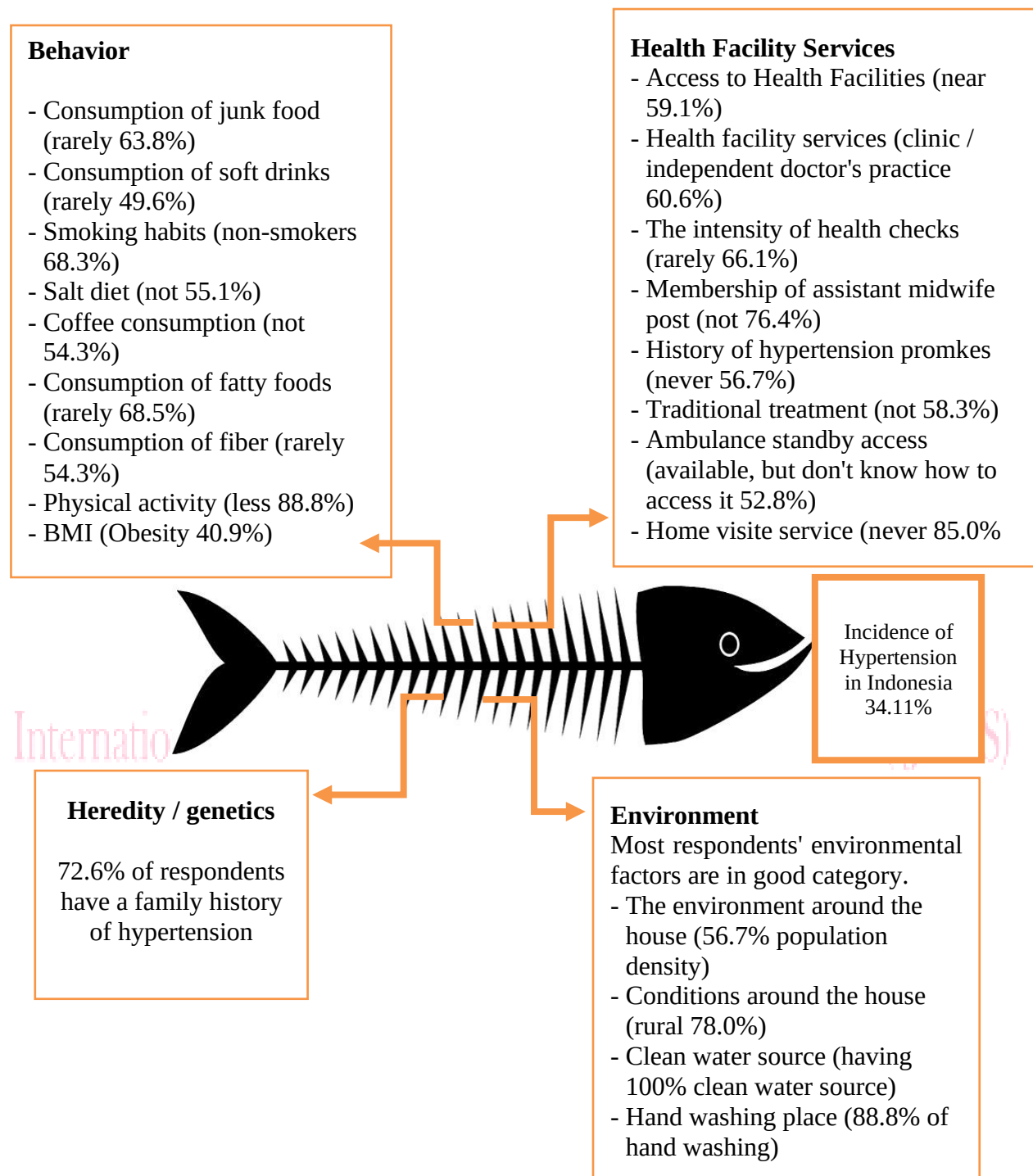


Figure 1 Fishbone analysis



2. The problem tree

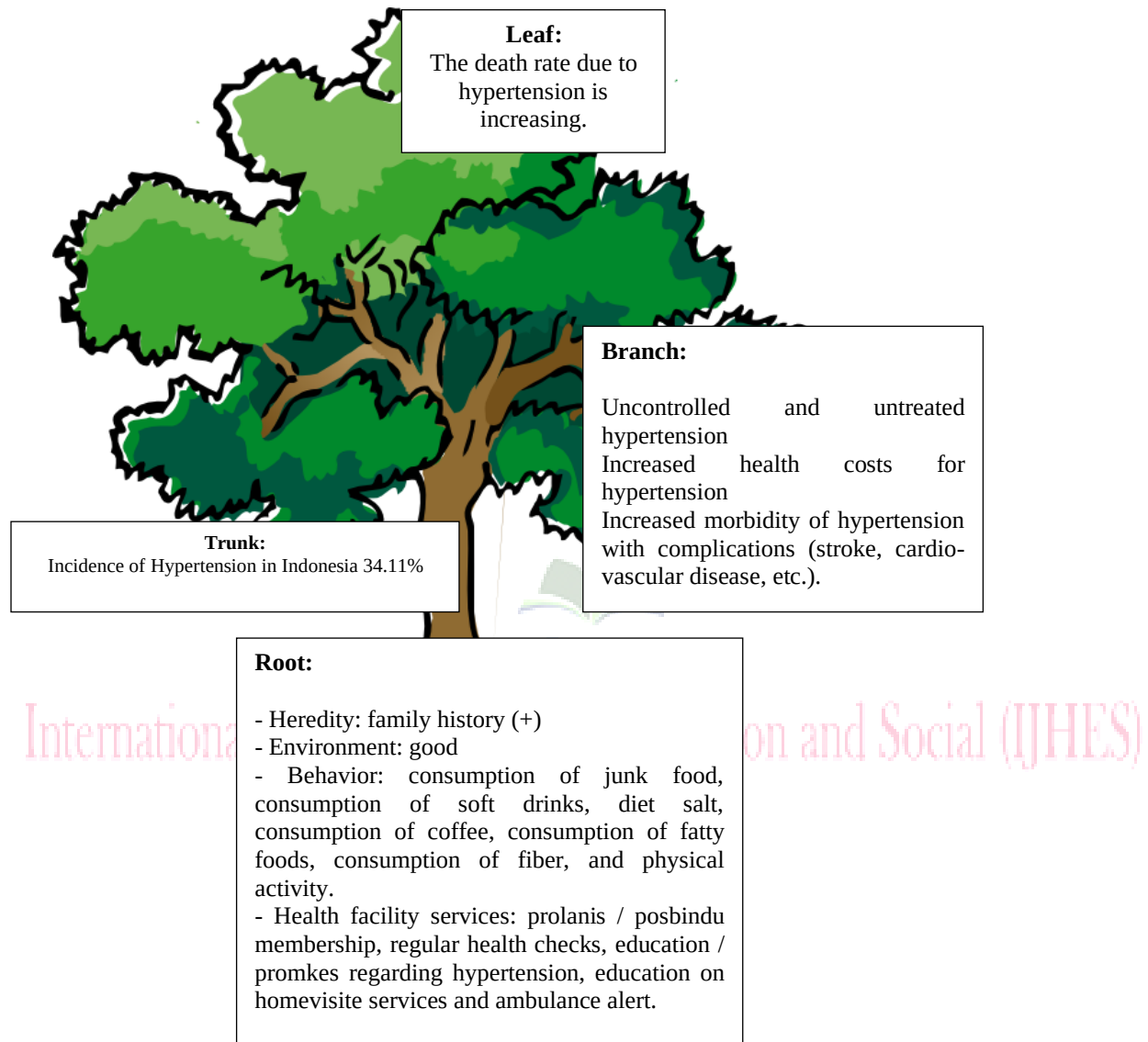


Figure 2 Problem tree



Educational Media Specifications

1. Problem Solution

Table 8 Solution

Indicator	Problem	Solution
Genetic	The presence of a history of hypertension in the family	Screening residents with a family history of hypertension for prevention and early detection
Social environment	Surrounding environment	Continue to apply a clean and healthy lifestyle and Community Movement
Behavior	Conditions around the house	(Keep washing your hands,
Health facility services	Access to clean water	Maintain cleanliness around the house, and good waste treatment).

The solution that can be done to overcome the problems of obesity and hypertension among respondents is to do sports activities such as gymnastics, which are held in small areas regularly. Most of the respondents have a family history of hypertension, therefore screening people with a history of hypertension can be used to prevent and detect hypertension early. Respondents found a good social environment, for that people need to continue to apply a clean and healthy lifestyle and community movements such as diligently washing their hands, keeping the house clean, and avoiding stress. To overcome the problem of behavior and habits in the community, education or counseling on balanced food can be carried out, holding regular sports or gymnastics in the region and continuing to implement a clean and healthy lifestyle and Community Movement. Based on the results we have obtained, there are still many respondents who do not routinely seek treatment and many respondents do not know



how to access the standby ambulance and home visit, for this reason education or counseling can be carried out so that the public can carry out routine health checks and seek treatment regularly. In addition, education or counseling is needed regarding access to home visits and standby ambulances.

2. Educational Media Specifications

- a. Title : prevention and control of hypertension with "CERDIK".
- b. Form : video.
- c. Media : dissemination through social media (Youtube).
- d. Content / material : PTM health promotion.
- e. Target : society at large.
- f. Reference : p2ptmkemenkes.
- g. Script : (attached)

Public education with the prevention and control of hypertension "CERDIK" as follows:

- a. Regular health checks
- b. Get rid of cigarette smoke
- c. Be diligent in physical activity
- d. Balanced diet
- e. Enough rest
- f. Manage stress



Conclusion

The problem that becomes a priority based on the ultrasound assessment is selected hypertension as a priority problem. The incidence of hypertension in Indonesia based on Riskerdas 2018 has a percentage of 34.11%. Based on the HL analysis. However, from the research conducted, it was found that there were problems with behavioral factors, environment and health facility accents. However, the respondent's environmental factors are good. The selection of educational media as one of the solutions to the selected problem is a promotional and preventive effort in the prevention and management of hypertension with video media which is distributed through Youtube social media.



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