Original Article

The Influence of Individual Beliefs and Social Support to the Prevention Behaviour of Hypertension in the Communities of Kupang East Nusa Tenggara-Indonesia

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Abstract

Background: The incidence of hypertension in the communities located in the City of Kupang has increased every year, where in general, it is influenced by the behavior and lifestyle of the communities. Therefore, this study is aimed at analyzing the influence of individual beliefs and social support to hypertension preventive behaviors among communities in the City of Kupang. **Methods:** The type of research is observational analytic, with case-control study design. The sample size of the research is 180; with sampling technic is Multistage Random Sampling. The analysis technic is Structural equation modeling based on Smart Partial Least Square (Smart-PLS). **Result:** The result of the research showed that the average age of respondents was 52.33 years, minimum 40 years old and maximum 59 years old with deviation standard (DS) 5.626. The average age of the respondents with hypertension 52.98 years with deviation standard (DS) 5,534, and the average age of the respondents without hypertension was 51.68 years old with Deviation Standard (DS) 5.672. The statistical test shows Individual belief has positive and significant influence to perceived threat (T-Statistics 12.807) and the Inner Weight is 0.792, which means that every increase of the individual belief will increase Perceived threat equal to 0.792. Social support has positive and significant influence to perceived threat (T-Statistics 2.607) and Inner Weight is 0.160, which means that any increase in support will increase perceived threat by 0.160. Perceived threat significantly influences to the prevention behaviour of hypertension (T-Statistics 4.312) and the Inner Weight is 0,084, which means that any increase of perceived threat will increase the prevention behaviour equal to 0.084. The prevention behavior has positive and significant influence to hypertension (T-Statistics 435.724) and Inner Weight is 0,955, which means that any increase of any adverse behavior will increase hypertension equal to 0,955. **Conclusion:** Individual beliefs directly affect perceived threat. While social support directly affects the perceived threat. Perceived threats directly affect the prevention behavior of hypertension. It is recommended to improve Individual belief and social support through counseling, suggestions and advices, providing examples of others and the successes achieved in self-control.

Keywords: Individual belief; Social supports; Prevention; Hypertension

Introduction

Hypertension is generally influenced by behavioral and lifestyle factors in people who have risk factors. Poor prevention behavior from the beginning is improved through lifestyle modifications include self-control of dietary management, stress, activities or physical exercises, alcohol and smoking habits. Several studies have shown a significant association between diet, stress, alcoholism and smoking habit with hypertension. [1-3]

Hypertension is an increase in blood pressure that causes continuous effects to targeted organs, such as brain stroke, coronary heart diseases. This disease has become a major problem in public health in Indonesia as well as in some countries in the world. An estimated 80% rise in hypertension cases, especially in developing countries in 2005 grew from 639 million cases in 2000, and it is estimated to be 1.15 billion cases by 2025. This prediction is based on current rates of hypertension and current population growth. [1,4]

The incidence of hypertension in the City of Kupang has been increasing from year to year. The results of the study in the City Kupang in 2010 showed that 72% of unhealthy behavior was among people with hypertension, while the proportion of unhealthy behavior in non-hypertensive people was 48%. In 2011 the study showed that 35.07% of people with hypertension had a genetic history, their average level of knowledge about prevention of hypertension was poor (51% - 56%). More or less 56% has unhealthy behavior especially in doing sport activities less than 10 minutes per day, and 76.12% with habit of eating salty food, 74,63% with fatty/greasy/fried food habit, 85.82% pork eating habit with frequency of every 2 or 3 days and more than 3 days, 48.51% with dog-meat eating habits with frequency of every 2 or 3 days and more than 3 days, 32.09% has smoking habit and 67.44% in total 6-12 cigarettes per day, 59.7% with coffee drinking habits with

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frequencies in general 2-3 times per day, 86.25% and 26.42% with alcohol consumption habits. [5]

The behavior of community in consuming risky foods such as animal-derived protein such as pork and dog meat that is usually used in celebrations, parties or cultural parties and is also available in the street food stalls/restaurants. The behavior of the communities is influenced by the culture of some people who do not put limits on the type of food and the low of grain or plant-based food source as geographically in East Nusa Tenggara in general; Kupang in particular is dry and has low rainfall. [6]

Porcin animal is fast in deposition of fat; both domestic pigs and wild pigs have almost the same fat content. A domestic pig fat is 85.17 mg/100 grams and wild boar 88.00 mg/100 grams. While the lipid profile value in dogs has cholesterol content of 110-266 mg/dl and the content of triglyceride is 20-112 mg/dl, higher than other species. The results of cholesterol level testing on local dogs showed average cholesterol levels of 220.5 ± 37.71[a] mg/dl and triglyceride content of 70.7 ± 21.30[b] mg/dl. [7-9]

Social support has a relationship with people's behavior in preventing hypertension, such as the presence of a typical family bond that does not provide support for family members who have hypertension risk and getting support from people around the workplace, besides that it has also been tested as a causal intervention to reduce the blood pressure. Looking at the above background, the purpose of this study is to analyze the influence of individual beliefs and social support on hypertension prevention behavior in the City of Kupang.

Materials and Methods

Type of research used is observational research with case control study as the research design. This type of research is based on the method of collecting and analyzing the data in numerical form; it is a quantitative research -a selected causality research based on the result of the analysis of size of causative relation between an independent variable and a dependent variable. The results of the study led to the causal of a series of factors of individual beliefs, namely perceived susceptibility, perceived severity, perceived benefits, perceived barriers and social support that influence perceived threats and ultimately influencing the prevention of hypertension and affecting individual blood pressure.

This research was conducted in 2 (two) territories of puskesmas in the City of Kupang, namely Oebobo Community Health Centre in Oebobo and Fatululi Sub-Districts, and Bakunase Community Health Centre in Airnona and Bakunase Sub-Districts with 180 sample samples comprised of 90 people with hypertension and 90 people non-hypertension. The sampling technique used in the study was Multistage Random Sampling technique, with the following steps: The first stage was the selection of 2 (two) puskesmas with the most cases, the Oebobo Community Health Center in Oebobo and Fatululi Sub-districts and Bakunase Public Health Center in Airnona and Bakunase Sub-districts. The second phase was screening the case and controlling population with a history of genetic hypertension. Third stage was cluster selection (Rukun Warga/Rukun Tetangga) with simple random technique in each kelurahan. Fourth stage was randoming sample unit.

Analysis used in research is to study the influence of independent to dependent variable. The analytical technique used is the Variance-based or component-based structural equation model or Smart Partial Least Square (Smart-PLS). This analysis is powerful, since it does not assume the data should be of a certain scale, small sample and used for confirmation of theory [7].

Results

The result of the study showed that the average age of respondents (X) 52.33 years, with minimum 40 years and maximum 59 years and deviation standard (DS) 5.626. The mean age of respondents with hypertension (X) 52.98 years and deviation standard (DS) 5.534, and average age of respondents without hypertension were (X) 51.68 years and deviation standard (DS) 5.672.

Table 1 show that most of the respondents were 55-59 years old (44.4%) and the least 40-44 years old (11.73%). Based on the hypertension status, most of respondents aged (43.3%) were 55-59 years with hypertension and 45.6% did not have any hypertension.

Table 2 shows most of (56.7%) people with hypertension were male (43.3%).

Table 3 below shows a partially perceived vulnerability rate by an individual (72.8%), classified as very good category and a small percentage (0.0%) classified as bad category. Based on the partial hypertension status (74.4%) classified as very good category in people with no hypertension and none (0.0%) classified as bad category and poor category in people with hypertension and no hypertension. Perceived severity or severity perceived by most of the respondents (37.2%) was

Table 1: Distribution of the respondent's age.

Age (Year)	Hypertension Status		Total
	Hypertension	Non Hypertension	
40-44	12 (13.3%)	9 (10.0%)	21 (11.7%)
45-49	17 (18.9%)	15 (26.7%)	32 (17.8%)
50-54	22 (24.4%)	25 (27.8%)	47 (26.1%)
55-59	39 (43.3%)	41 (45.6%)	80 (44.4%)
Total	90 (100%)	90 (100%)	180 (100%)

Table 2: Distribution of the respondents based on sex in the city of Kupang, 2017.

Sex	Hypertension Status		Total
	Hypertension	Non Hypertension	
Male	39 (43.3%)	39 (43.3%)	81 (46.0%)
Female	51 (56.7%)	51 (56.7%)	99 (54.0%)
Total	90 (100%)	90 (100%)	180 (100%)

Table 3: Distribution of individual belief in the community of the City of Kupang.

Individual belief	Category	Hypertension Status		Total
		Hypertension	No Hypertension	
Perceived susceptibility	poor	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Average	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Fair	2 (2.2%)	1 (11.0%)	3 (1.7%)
	Good	24 (26.7%)	22 (24.4%)	46 (25.6%)
	Very good	64 (71.1%)	67 (74.4%)	131 (72.8%)
	Total	90 (100%)	90 (100%)	180 (100%)
Perceived Severity	poor	4 (4.4%)	1 (1.1%)	5 (2.8%)
	Average	7 (7.8%)	4 (4.4%)	11 (6.1%)
	Fair	33 (36.7%)	34 (37.8%)	67 (37.2%)
	Good	26 (28.9%)	3640.0%)	62 (34.4%)
	Very good	20 (22.2%)	15 (16.7%%)	35 (19.4%)
	Total	90 (100%)	90 (100%)	180 (100%)
Perceived benefits	poor	3 (3.3%)	1 (1.1%)	4 (2.2%)
	Average	15 (16.7%)	14 (15.6%)	29 (16.1%)
	Fair	25 (27.8%)	24 (26.7%)	49 (27.2%)
	Good	26 (28.9%)	34 (37.8%)	60 (33.3%)
	Very good	21 (33.3%)	17 (18.9%)	38 (21.1%)
	Total	90 (100%)	90 (100%)	180 (100%)
Perceived Barriers	poor	1 (1.1%)	1 (1.1%)	2 (1.1%)
	Average	9 (10.0%)	4 (4.4%)	13 (7.2%)
	Fair	27 (30.0%)	27 (30.0%)	54 (30.0%)
	Good	27 (30.0%)	41 (45.6%)	68 (37.8%)
	Very good	26 (28.9%)	17 (18.9%)	43 (23.9%)
	Total	90 (100%)	90 (100%)	180 (100%)

fair enough category, and the least (2.8%) was poor category. Based on hypertension status, more people (36.7%) with hypertension classified fair enough category and (40.0%) non hypertensive people classified as good category and the least (1.11%) classified as bad category for individuals who do not hypertension.

Perceived benefits or benefits perceived by most of the respondents (33.3%) were good category, and the least (22.0%) were poor. Based on the most of hypertension status (33.3%) people with hypertension were categorized as excellent and (37.8%) were categorized as good for people without hypertension, and the least (1.1%) were categorized as bad for the non-hypertension respondents.

Perceived barriers or barriers mostly perceived by the respondents (37.8%) were categorized as good and the least (1.1%) were poor. Based on the most of hypertension status (30.0%) were categorized as fair and good category, and (45.6%) were good category in non-hypertensive individual and the least (1.1%) were classified as poor category in hypertensive people with no hypertension.

Table 4 below shows the greatest information support (38.9%) was classified as high category and the least (5.6%) was very low. Based on hypertension status, the most (31.1%) people with hypertension and (46.7%) non hypertensive people were classified high category and the least (5.6%) were classified very low category for non- hypertensive respondents.

Emotional support scored the greatest (40.6%) was classified high category and the least (1.11%) was classified low category. Based on hypertension status the most (37.8%) people with hypertension and (43.3%) non hypertensive people were classified high category and the least (11.1%) were classified very low category in hypertension individual. Appreciation Support scored the most awards (44.4%) was classified the high category and the least (1.1%) was classified in the low category. Based on hypertension status most of people (43.3%) with hypertension and (45.6%) non-hypertensive people were classified as high category and the least (1.11%) were classified very low category in non-hypertensive individuals.

Instrumental Support scored the most support (30.6%) was classified high category and the least (2.2%) was classified very low category. Based on hypertension status, most of people (27.8%) with hypertension and (33.3%) non-hypertensive people belonging to high category and the least (2.2%) were classified low category in non-hypertensive individuals.

Table 5 below shows the most score of perceived threat or threat perceived by individuals in prevention of hypertension (42.2%) were classified as good categories, and the least threat perceived by individuals (1.11%) were classified as poor/bad category. Based on hypertension status - perceived threat - the most threat perceived in people with hypertension (36.7%) and (47.8%) in non-hypertensive people were classified as good category, and the least (1.11%) were poor category in individuals who had hypertension and with no hypertension.

Table 6 below shows the prevention behavior of individual hypertension performed through weight control, diet, exercise, limiting smoking habits and doing recreational activities and hobbies of the communities in the City of Kupang. The results of the study showed that highest score was individual behavior in preventing hypertension through weight control (31.1%) was classified as poor and the least (12.2%) was classified into average and fair category. Based on status of hypertension with weight control behavior scored the highest (33.3%) in people with hypertension, it was classified poor; and (30.0%) by people who did not have hypertension were categorized very good, and a small part (11.1%) was classified less in hypertensive individuals.

The prevention behavior of individual hypertension performed through weight control, dietary pattern, exercises, limiting smoking habits and doing recreational activities and hobbies of the communities in the City of Kupang. The results of the study showed that highest score was individual behavior in preventing hypertension through weight control (31.1%) and classified as poor and the least (12.2%) were classified into average and fair category. Based on status of hypertension with weight control behavior scored the highest (33.3%) in people with hypertension, it was classified poor; and (30.0%) by people who did not have hypertension were categorized very good, and a small part -11.1% were classified less in hypertensive individuals.

Individual dietary behavior scored the most part (33.9%) and classified as poor category and the smallest (2.2%) and classified as fairly good. Based on status of hypertension, individual behavior on diet scored the most part (36.7%) in people with hypertension, it was classified as unfavorable category, and (32.2%) in non-hypertensive people was classified as very good category, and a small part of individual eating pattern behavior scored 1.1%, it is considered fairly good in hypertensive individuals.

Behavior of hypertension prevention through exercise/sport scored the most part (41.7%) it was classified very good category and the least (4.4%) was classified fairly good category. Based on hypertension status, exercise behavior scored the mostly part (44.4%) in people with hypertension were classified bad category; and (43.3%) in non-hypertensive people was classified very good category, and a small part (2.2%) was classified as fairly enough category in hypertensive individuals.

Table 4: Community's social support in the City of Kupang.

Social Support	Category	Hypertension Status		Total
		Hypertension	No Hypertension	
Information Support	Very Low	7 (7.8%)	3 (3.3%)	10 (5.6%)
	Low	9 (10.0%)	7 (7.8%)	16 (8.9%)
	Fairly high	21 (23.3%)	21 (23.3%)	42 (23.3%)
	Hight	28 (31.1%)	42 (46.7%)	70 (38.9%)
	Very High	25 (27.8%)	17 (18.9%)	42 (23.3%)
	Total	90 (100%)	90 (100%)	180 (100%)
Emotional Support	Very Low	10 (11.1%)	11 (12.2%)	21 (11.7%)
	Low	1 (1.1%)	1 (1.1%)	2 (1.1%)
	Fairly high	19 (21.1%)	19 (21.1%)	38 (21.1%)
	Hight	34 (37.8%)	39 (43.3%)	73 (40.6%)
	Very High	14 (15.6%)	12 (13.3%)	26 (14.4%)
	Total	90 (100%)	90 (100%)	180 (100%)
Appreciation Support	Very Low	2 (2.2%)	1 (1.1%)	3 (1.7%)
	Low	2 (2.2%)	0 (0.0%)	2 (1.1%)
	Fairly high	17 (18.9%)	18 (20.0%)	35 (19.4%)
	Hight	39 (43.3%)	41 (45.6%)	80 (44.4%)
	Very High	30 (33.3%)	30 (33.3%)	60 (33.3%)
	Total	90 (100%)	90 (100%)	180 (100%)
Instrumental Support	Very Low	.3 (3,3%)	1 (1,1%)	4 (2,2%)
	Low	8 (8.9%)	5 (5,6%)	13 (7,2%)
	Fairly high	22 (24.4%)	22 (24,4%)	44 (24,4%)
	Hight	25 (27.8%)	30 (33,3%)	55 (30,6%)
	Very High	32 (17.8%)	32 (17,8%)	64 (17,8%)
	Total	90 (100%)	90 (100%)	180 (100%)

Table 5: Distribution of perceived threat in the community of the City of Kupang.

Perceived Threat	Kategori	Status Hipertensi		Total
		Hipertensi	Tidak Hipertensi	
Perceived Threat	poor	1 (1.11%)	1 (1.11%)	2 (1.11%)
	Average	11 (12.2%)	6 (6.7%)	17 (9.4%)
	Fair	28 (31.1%)	27 (30.0%)	55 (30.6%)
	Good	33 (36.7%)	43 (47.8%)	76 (42.2%)
	Very good	17 (18.9%)	13 (14.4%)	30 (16.7%)
	Total	90 (100%)	90 (100%)	180 (100%)

Most of individual smoking behaviors (58.3%) were classified badly and the least smoking behaviors (0.0%) were classified as good category. Based on hypertension status of individuals the most smoking behavior (60.0%) was in people with hypertension and (56.7%) in hypertensive people, they were as poor category and with no smoking behaviour (0.0%) was classified good category in hypertensive and non-hypertensive individuals.

Most individual recreation behavior/behavior related to hobby (36.7%) was classified as fairly good category and the least recreation behavior/ behavoiur related to hobby (6.1%) was classified as very good category. Based on hypertension status, the most recreation behavior/hobbies of individuals (35.6%) in people with hypertension and (37.8%) in non-hypertensive people were classified as poor category and the least - 5.6%- was very good in individuals who did not have hypertension.

In this research, PLS was used for data analysis technique. Based on the results of data processing, evaluation of the model of structural equation with PLS analysis. The evaluation consisted of two basic evaluations: 1). the evaluation of the measurement model (the outer model) is to determine the validity and reliability of the latent variable indicator, and 2). The evaluation of the structural model (the inner model) is to determine the accuracy of the model. Thus, before the evaluation of the research instrument model as a data collection tool, they must be valid and reliable. The validity test was intended to find out whether the indicators in the questionnaire were adequately representative and reliable. The validity and reliablity tests were done by using confirmatory factor analysis on each latent variable.

Table 6: Prevention behavior of communities in the City of Kupang.

Prevention Behavior	Category	Hypertension Status		
		Hypertension	No Hypertension	Total
Weight Gain	poor	30 (33.3%)	26 (28.9%)	56 (31.1%)
	Average	10 (11.1%)	12 (13.3%)	22 (12.2%)
	Fair	11 (12.2%)	11 (12.2%)	22 (12.2%)
	Good	11 (12.2%)	14 (15.6%)	25 (13.9%)
	Very good	28 (31.1%)	27 (30.0%)	55 (30.6%)
	Total	90 (100%)	90 (100%)	180 (100%)
Eating Pattern	poor	33 (36.7%)	28 (31.1%)	61 (33.9%)
	Average	14 (15.6%)	13 (14.4%)	27 (15.0%)
	Fair	1 (1.1%)	3 (3.3%)	4 (2.2%)
	Good	12 (13.3%)	17 (18.9%)	29 (16.1%)
	Very good	30 (33.3%)	29 (32.2%)	59 (32.8%)
	Total	90 (100%)	90 (100%)	180 (100%)
Physical Activities	poor	40 (44.4)	34 (37.8%)	74 (41.1%)
	Average	6 (6.7%)	5 (5.6%)	11 (6.1%)
	Fair	2 (2.2%)	6 (6.7%)	8 (4.4%)
	Good	6 (6.7%)	6 (6.7%)	12 (6.7%)
	Very good	36 (40.0%)	39 (43.3%)	75 (41.7%)
	Total	90 (100%)	90 (100%)	180 (100%)
Smoking	poor	54 (60.0%)	51 (56.7%)	105 (58.3%)
	Average	19 (21.1%)	25 (27.8%)	44 (24.4%)
	Fair	10 (11.1%)	6 (6.7%)	16 (8.9%)
	Good	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Very good	7 (7.8%)	8 (8.9%)	15 (8.3%)
	Total	90 (100%)	90 (100%)	180 (100%)
Recreation/ Hobby	poor	16 (17.8%)	11 (12.2%)	27 (15.0%)
	Average	32 (35.6%)	34 (37.8%)	66 (36.7%)
	Fair	18 (20.0%)	28 (31.1%)	46 (25.6%)
	Good	18 (2.0%)	12 (13.3%)	30 (16.7%)
	Very good	6 (6.7%)	5 (5,6%)	11 (6.1%)
	Total	90 (100%)	90 (100%)	180 (100%)

Table 7: Distribution of inner weight, deviation standard and significance.

Influence	Inner Weight	Deviation Standard	t-Statistic	Notes
Social Support→Perceived Threat	0.160	0.061	2.607	Significant
Individual belief→Perceived Threat	0.792	0.062	12.807	Significant
Perceived Threat→ Prevention behaviour	0.084	0.019	4.312	Significant
Prevention behaviour→Hypertention	0.955	0.002	435.724	Significant

The results of the validity and reliablity tests showed that individual belief variable was formed by four indicators, namely perceived susceptibility, perceived severity, perceived benefits, and perceived barriers. The value of outer loading indicates that the indicator that has the highest factor loading value is Perceived benefits with loading factor value of 0.974, followed by Perceived Barriers with loading factor value of 0.965, Perceived Severity indicator with loading factor value of 0.961, and Perceived susceptibility indicator with value loading factor of 0.846. It is known that each indicator has a factor loading value above 0.5. This means that all of these indicators were declared valid to form latent variables, and then these indicators can be accepted as a measurer of Individual Belief variables.

The social support variables are formed by four indicators, namely information support, emotional support, awards support, and instrument support. The result of the outer loading value indicate that the indicator that has the highest factor loading value is the instrument support with the loading factor value of 0.970, respectively followed by the information support with the loading factor value of 0.968, then the indicator of emotional support with the loading factor value of 0.958, and the rewards indicator with the value loading factor of 0.949. It is known that each indicator has a loading factor value more than 0.5. It means that all of these indicators are declared valid to form the latent variable of social support, and then these indicators can be accepted as a measurer of the social support variable.

Endogenous variable of perceived threat were formed by one indicator, it is perceived threat. The result of the outer loading indicated that the indicator has value loading, namely perceived threat with loading factor value of 1,000. The indicator is considered valid to form the latent variable of the perceived threat, and then the indicator can be accepted as a measurer of the perceived threat variable.

Endogenous variables of preventive behavior are shaped by five indicators, namely weight control, diet, exercise, smoking and recreation/hobbies. Outer loading value results indicate that the indicator that has the highest factor loading value is the weight control and dietary pattern respectively with the loading factor value of 0.972, and subsequently followed by the physical exercises with the loading factor value of 0.960, the recreation/hobby indicator with the value of loading a factor of 0.952, and a smoking indicator with a factor loading rate of 0.835. It is known that each indicator has a factor loading value above 0.5. Meaning that all of these indicators are declared valid to form latent variables of prevention behavior, and then these indicators can be accepted as a variable measure of preventive behavior.

Endogenous variable of hypertension was formed by one indicator, namely blood pressure. The outer loading value indicates that the indicator that has value loading factor is hypertension with loading factor value of 1,000. The indicator was stated valid to form the latent variables of hypertension, and then the indicator can be accepted as a measurer of hypertension variables.

Table 7 shows the Individual belief have positive and significant influence on the perceived threat. This can be seen from the path marked by the positive coefficient of 0.792 with the value of T-Statistic of 12.807 greater than 1.96. Thus, the Individual belief directly influences

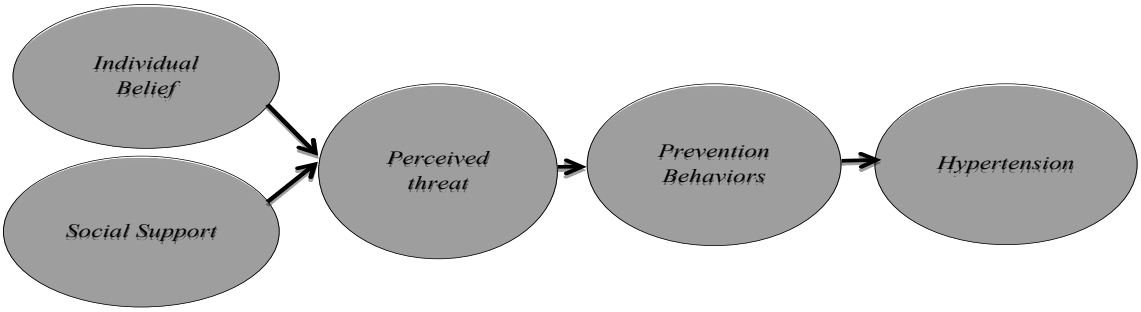

Figure 1: Model of the influence of individual, beliefs and social support.

on the perceived threat of 0.792, which means that every increase of individual belief and will raise the perceived threat of 0.792.

Social support has positive and significant influence on the perceived threat. This can be seen from the path marked by the positive coefficient of 0.160 with the value of T-Statistic of 2.607, greater than 1.96. Thus, the social support directly influences on the perceived threat of 0.160, which means that every increase in social support, it will raise the perceived threat of 0.160.

Perceived threat has positive and significant influence on the prevention behavior. This can be seen from the path marked by the positive coefficient of 0.084 with the value of T-Statistic of 4.312 greater than 1.96. Thus, the perceived threat directly influences on the prevention behaviour of 0.084, which means that every increase in the perceived threat, it will raise the prevention behavior of 0.084.

Prevention behavior has positive and significant influence on hypertension. This can be seen from the path marked by the positive coefficient of 0.955 with the value of T-Statistics of 435.724, greater than 1.96. Thus, the behavior of the prevention directly influences on hypertension by 0.955, which means that every increase in the worse prevention behavior will raise hypertension of 0.955.

last model of the influence of the individual belief and the social support to the prevention behaviour of hypertension is shown in the Figure 1 below, which shows the individual belief and the social support from people around the family, neighbors and the workplace makes the individual is able to perceive the existing threats. On the contrary, if the perceived threats that is felt less or overlooked, then the person tends to behave and adopt a free lifestyle and ignoring to maintain their health and making efforts to prevent hypertension. Keeping good health of oneself, especially maintain diet, perform the activity and exercise regularly, avoid smoking habit and alcohol, doing recreation and controls body weight and health regularly, then hypertension can be prevented.

Discussion

The influence of individual beliefs includes the dimensions of the vulnerability perception to measure the subjective perception of the individual against the risk of health conditions. For the case of medical disease, dimensions has been reformulated, including the individual acceptance of diagnosis, personal assessment on the re-vulnerability (resusceptibility) and vulnerability to diseases in general. The perception of severity explains the feelings on the severity of the disease or ignoring it unhealed. Severity perception includes an evaluation of the medical and clinical consequences, for example to death, disability and pain as well as the possible consequences of the social influence to working conditions, family life and social relations. The combination of vulnerability and severity is called threat perception (perceived threat). [10]

The results of the study showed that the individual belief has positive and significant influence on the perceived threat. In the individual belief, main components associated to perceived susceptibility or perceived vulnerability, perceived severity or joint perceived severity is called as a threat or perceived threat. Perception of the severity of the create feelings about the severity of the disease or being submissive, if the individual feel as a threat that will affect working conditions, family life and social relations.

Individual belief in the theory of Health Belief Model is a theory of the value of hope, the concept of the value of hope in the context of health related behavior, then the concept is changed into (1) a desire to avoid the disease or be healthy (value), and (2) a belief, if certain healthy actions can be done, it will prevent or reduce pain. Hope, then, is explained through the calculation of the individual on personal calculation on his/her personal vulnerability to disease and the severity of the disease, as well as the possible ability to reduce the threats through individual actions. Health Belief Model was developed from the theory of behavior, among others, it assumes that the behavior of a person depending on (1) values that individuals set to goals, and (2) predictions of the individual to the possibility of his or her behavior to be able to achieve the goals. The scope and the application of the Health Belief Model in the health behavior, for instance, behaviors related to prevention efforts to avoid sickness, behavior related to diagnosis of diseases and those that may affect the severity of the diseases. [10,11]

Social support is interpersonal transactions indicated by providing helps to other individuals, where they are in general obtained from the love ones. The social support can be in the form information, behavioral assistance, or any materials obtained due to closed social relationships that make the individual feel respected, valuable, and loved. [10]

The results of the study shows the social support directly influence the perceived threat. Social support can be, among other, information supports from a friend or friends, family members and neighbors. The information supports are related to hypertension in the form of advices, suggestions and discussion about hypertension and its prevention; while emotional support, namely attention, creating a friendly atmosphere; and appreciation support, such as other people understand and appreciate each complaints and pushing them to check up their health, and instrumental support, such as people around him preparing facilities, food, transportation or health financing. If the given supports would help to reduce uncertainty and predicted things or help to produce the desired results, sense of self-control over certain situations and the domain of life will be improved. [10]

Based on the results of research social support difference of black and white people shows that low social support on both the black and white can increase hypertension, where the difference between the races of them has no greater social support compared with those who have social support. On the contrary, ethnic differences Mexican-American/ white with social support only were under observation; American-Mexico with social support has little chance affected by hypertension than white skin. [10]

The combination of perceived vulnerability and perceived severity making individuals feel as a threat (perceived threat) therefore it changes the behavior of the individual. The results of the study showed that perceived threat directly influence on the prevention behavior of hypertension. Perceived Threat or threat that was perceived mostly by people was classified as good category. Based on the status of hypertension, perceived threat or threat that was perceived, in general, was classified as good category on those without hypertension. The height of the threat that was felt by the individual influenced behavior for prevention. [11]

The behavior of the action or practice is all the activities aim at maintaining health, such as knowledge, attitude, and actions or health practices which consist of four factors: (1) actions or practices associated to infectious diseases and non-infectious diseases; (2) actions or practices associated to factors that affect health; (3) actions or practices associated to the use of health care facilities; (4) Actions or practices to avoid the accident both household accidents, or traffic accidents or accidents in public places. [12,13]

The results of the study showed that the prevention behavior of hypertension directly influenced hypertension. The prevention behavior of hypertension consisted of weight control behavior, and mostly classified as bad behavior, most of the individual eating pattern was classified as bad behavior, prevention of hypertension through physical and sport activities were mostly classified as very good category, smoking behavior of the individual mostly classified as bad category, and most of leisure behavior/ individual hobby was classified as fairly enough. The results of the research showed the majority of the individuals had average behaviour in the prevention of hypertension. Pattern of diet classified as bad category was namely the habit of drinking alcohol, eating salty food, fried and fatty food derived from pork and dog meat, eating visceral organs and sea food, smoking habit excessive force and the lack of physical activities/sport cause disorders of the body metabolism.

The prevention behaviour of hypertension is apart from self-efficacy factors or self-confidence on the ability to play an important role in self-regulation, the results of the study showed self- regulation directly influence on the prevention behaviour of hypertension. Individuals can be contronted with the potential pain through two ways or distributions, namely the perception of the symptoms such as “I feel pain on my chest” or social message like “My doctor has diagnosed this pain as angina”. According to the theory of problem solving, individuals are motivated to return to the normal and free state-issue. Likewise, in this research, the individuals to try to set their blood pressure them-self - (15.9 ± 4.08), and housewife - (12.49 ± 4.33. [14-16]

Conclusion

Conclusion of this study; (1) Individual belief consists of the perception of vulnerability, perceived severity, perceived benefits and perceived obstacles that has positive influence directly on the perceived threat; (2) Social Support consists of information support, emotional support, appreciation support and instrumental support have positive influence directly on the perceived threat; (3) Perceived threat has positive influence directly to the prevention behavior of hypertension; and (4) The prevention behavior of hypertension consists of weight control, diet pattern, physical activities/sports, smoking habit and recreation/ hobbies that influence positively to hypertension or blood pressure

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Conflict of Interest

All authors have no conflict of interest with anyone in the study. We are responsible for that.

Competing of Interests

The author and co-authors declare that require the publication of an article in the Web of Sciences or Thompson Reuter index journal to qualify for an academic upgrading in accordance with the provisions of the research-technology ministry, and higher education in Indonesia.

References

1. Sugiharto A, Suharyo H, Sakundarno A, Shofa C. Faktor-Faktor Risiko Hipertensi Grade II Pada Masyarakat (Studi Kasus di Kabupaten Karanganyar) 2006.
2. Méndez-Chacón E, Santamaría-Ulloa C, Rosero-Bixby L. Factors associated with hypertension prevalence, unawareness and treatment among Costa Rican elderly. BMC Public Health. 2008;8:275.
3. Iyalomhe GB, Iyalomhe SI. Hypertension-related knowledge, attitudes and life-style practices among hypertensive patients in a sub-urban Nigerian community. Journal of Public Health and epidemiology. 2010;2:71-7.
4. Ari W. Gaya Hidup dan Gaya Hidup Sehat, Tantangan Promosi Kesehatan di Indonesia. Depkes RI, Pusat Promosi Kesehatan, 2005.
5. Rafael P, Telly M, Limbong K. Pengembangan Model Intervensi Keluarga Kalgary dengan Hipertensi, Laporan Penelitian, Poltekkes Kupang 2011.
6. Rafael P, Radja N. Pengaruh Gaya Hidup Masyarakat terhadap Prevalensi Hipertensi di Kelurahan Airnona Kupang, Jurnal Info Kesehatan, 2010.
7. Meyer DJ, Harvey JW. Veterinary laboratory medicine: interpretation and diagnosis. Philadelhia: Saunders, 2004.
8. Nurdaya AR. Studi Kadar Kolestrol dan Trigliserida pada Serum Anjing Kampung Umur 3-6 Bulan. Bogor: FKH-IPB, 2008.
9. Tobing SWL. Perbandingan Kualitas Karkas dan Daging antara Babi Landrace dengan Babi Hutan. Tesis. Prodi Ilmu Ternak, Program Pascasarjana Universitas Andalas, Padang, 2012.
10. Glanz K, Rimer BK, Viswanath K. Health behavior and health education: Theory, research, and practice. John Wiley & Sons, NY, USA, 2008.
11. Bandura A. In: Ramachaudran V, Editor: Encyclopedia of Human Behavior: New York, USA. 1994;4:71-81.
12. Notoatmodjo S. Promosi Kesehatan dan Ilmu Perilaku. Jakarta: Rineka Cipta, 2007.
13. Notoatmodjo S. Promosi Kesehatan, Teori dan Aplikasi. Jakarta: Rineka Cipta, 2010.
14. Rafael P, Katharina UW, Hari BN, Rahmat H. The effect of efficacy and collective efficacy on preventions behavior of community with hypertension in Kupang City East Nusatenggara Province. Journal of Health, Medicine and Nursing IISTE, 2017:44.
15. Bandura A. Self-efficacy toward a unifying theory of behaviour change. Psychology Review. 1997; 84:191-215.
16. Baghianimoghadam M, Aivazi S, Mzloomy SS, Baghianimoghadam B. Factors in relation with self–regulation of Hypertension, based on the Model of Goal Directed behavior in Yazd city. Journal of Medicine Life. 2011;15:30-35.