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Factor Affecting Hipertension Incidence to Papuan Ethnic at Yowari General Hospital Sentani Jayapura Regency Papuan Province

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Abstract

High blood pressure or hupertension often being called silent killer and mortality that excelsior because kill gently ala. Mark sense urbanization to Province Papuaning to cause changing Regency Papuan society life style Jayapura experiences changing. Of RSUD Yowari's data hypertension instance experiences step-up. There is purpose was to know factor affecting Hiptension Incidence To Papuan Ethnic At Yowari General Hospital Sentani Jayapura Regency Papuan Province. Observasional by designs studi case control. Population all patient comes from Papuan ethnic that visits at Poli Disease In Yowari general hospital Sentani Jayapura Regency on month of May until July 2016 totals 379 person. Outgrow sample as much 41 cases and 41 controls. Data approach used questionaire and analyzed by chi square and odd ratio. The results shows that there is corelatyion afecting hypertension incidence on Papuan ethnic at Yowari general hospital is aged (p value 0,039; OR= 2,952; CI95%= 1,154 – 7,556), genetic (p value 0,001; OR= 5,260; CI95%= 2,043 – 13,539), activity phisic (p value 0,001; OR= 3,733; CI95%= 1,496 – 9,318), obesity (p value 0,008; OR = 3,733; CI95%= 1,496 – 9,318), smoking (p value 0,008; OR= 3,563; CI95%= 1,328 – 9,555), coffe drunk (p value 0,013; OR= 3,589; CI95%= 1,401 – 6,227), diseased history (p value 0,000; OR= 6,445; CI95%= 2,383 – 17,436) and stress (p value 0,000; OR= 6,445; CI95%= 2,383 – 17,436).

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Meanwhile variable that not corelation affecting is sex (p value 0,376; OR = 1,635; CI95%= 0,683 – 3,915), education (p value 0,825; OR = 0,822; CI95%= 0,345 – 1,960), work (p value 0,180; OR = 0,494; CI95%= 0,203 – 1,202), income (p value 0,252; 0,539; CI95% (0,212 – 1,317), alcohol drunk (p value 0,103; OR = 2,426; CI95%= 0,945 – 6,227). Dominan factor incidence hpertension is aged, genetic, activity, obesity, salt consumption and hystory disease.

Keywords: Hypertension; Papuan ethnic.

1. Introduction

Hypertension is a condition in which blood pressure ≥140 mmHg and diastolic blood pressure ≥90 mmHg on someone who is not being consuming antihypertensives medicines. Hypertension can strike back and therefore deserve attention. Hypertension is called the silent killer because it kills slowly - land [1-3]. According to MoH RI [2,3] reported that there are 28.6% of adults aged > 18 years have hypertension. The pattern of the lifestyle of today's growing cause increasedHypertension Incidence in the community. It is estimated that approximately 20% of the adult population suffer from hypertension, especially in people with advanced age over 60 years old and 50% of elderly people suffer from hypertension, worldwide it is estimated that 1 billion people suffer from hypertension, which contributes to 7.1 million deaths per year. While the Basic Health Research (Riskedas [4] nationally approximately 31.7% of hypertensive patients, but has decreased in 2013 (25.8%) in 2013, and in Papua Riskesdas 3.3%. Jayapura District Health Office in 2013 reported 4,843 (1.76%) of the population suffering from hypertension Jayapura district. Jayapura District with the Total Population of 121 410 people, consisting of men and women amounted to 64.533 inhabitants amounted to 56.877 inhabitants, the largest population distribution in Sentani District which are urban areas or districts of the capital. Based on monthly reports of disease in 2015 there were 1,853 cases of hypertension or as much as 1.43% [5]. The highHypertension Incidence due to several factors which are risk factors for hypertension, which is a factor that can be changed (smoking, drinking alcohol) and the factors that can not be changed (age and gender). Effect between smoking and hypertension evidenced by the close links between smoking in the presence of atherosclerosis in all the vessels. Risk factors for hypertension others that the consumption of alcohol. Daily alcohol consumption can increase blood pressure by 1.21 mmHg in systolic and diastolic blood pressure of 0.55 mmHg for an average of one drink per day [6]. Lifestyle is the behavior patterns of everyday class of people in society. Lifestyle shows how people organize their personal life, community life, behavior in public, and an effort to distinguish the status of others through social symbols. Lifestyle or life style can be defined as well as everything that has characteristics, specificity and ordinances in the life of a given society. Attitud -risk behavior that is one of the causes of hypertension. Increased prevalence of cardiovascular disease each year become a major issue in every country, which is about 50% of cardiovascular disease is caused by hypertension [7]. Jayapura District is one of the District of Papua Province a province with a sufficient level of urbanization and high ethnic. Various culture and the development of information and technology has changed the lifestyle, especially those that affect the health of Papua. Based on data in Yowari Hospital, patient visits in 2015 there were 750 patients with hypertension and during the period May - July 2016 there were 104 people (18.34%) were exposed to hipertensidari 567, where the number of patients with Papua tribe as many as 379 people and as many suffer from hypertension 61 (16.09%). This is the underlying researchers interested in conducting

research on the factors - factors that affect theHypertension Incidence in people of Papua. The aim of research to identify factors - factors that affect theHypertension Incidence in people of Papua in Jayapura District Hospital Sentani Yowari 2016.

2. Materials and Methods

This study was an observational study with case control study design (case-control study). The case control study was an epidemiological study design is studying the effect of exposure (risk factors) to a disease or health status by comparing the case group and control group based on the exposed status. In a case-control study, the effects (health status) identified in this seat, whereas the risk factors identified in the past (retrospective) was conducted in the research of Poli Disease in Yowari Sentani Jayapura District Hospital which was held on October 1 - November 1 2016. The population in this study were all patients from the tribe of Papua that visit internal Disease Divisioan Yowari Sentani Jayapura District Hospital by the number of samples used samples of two proportions are 1: 1 = n1 + n2 = 41 + 41 = 82, so the number of the sample are of 82 people. The data were obtained using a questionnaire and analyzed using chi-square, odds ratios and binary logistic regression.

3. Results

1. Univariate Analysis

Table 4.3: Distribution of Independent and Dependent Variables

No	Variable	Frequency (n)	Percentage (%)
1	**Age**		
	> 35 years	52	63,4
	≤ 35 years	30	36,6
2	**Gender**		
	Male	39	47,6
	Female	43	52,4
3	**Education**		
	Low	38	46,3
	High	44	53,7
4	**Occupation**		
	Not Working	35	42,7

	Working	47	57,3
5	**Revenue/income**		
	Less	52	63,4
	Enough	30	36,6
6	**Genetic**		
	Exist	38	46,3
	Not Exist	44	53,7
7	**Physical Activity**		
	Less	43	52,4
	Enough	39	47,6
8	**Obesity**		
	Obesity	39	47,6
	Ideal	43	52,4
9	**Smoking Habit**		
	Smoker	27	32,9
	Passive Smoker	55	67,1
10	**Drinking Alcohol Habit**		
	Risky	28	34,1
	Not at risk	54	65,9
11	**Drinking Coffee habit**		
	Risky	32	39,0
	Not at risk	50	61,0
12	**Salt Consumption**		
	Often	39	47,6
	Not Often	43	52,4
13	**Disease History**		

	Risky	33	40,2
	Not at risk	49	59,8
14	**Depressed**		
	Depressed	46	56,1
	Un depressed	36	43,9
15	**Hipertension Case**		
	Case	41	50,0
	Control	41	50,0
Total		82	100

Based on table 4.3, shows that most respondents in the age group> 35 years as many as 52 people (63.4%), male gender - male as many as 43 people (52.4%), high education as many as 44 people (53.7%) , work 47 (57.3%), less income as many as 52 people (63.4%), a genetic no sebanayk 44 (53.7%), lack of physical activity as much as 43 people (52.4%). Most respondents to the ideal weight as many as 43 people (52.4%), non-smokers as many as 55 people (67.1%). Most respondents have the habit of drinking alcohol risky as many as 54 people (65.9%), drinking coffee habits do not risk as much as 50 people (61%), salt consumption is not often as many as 43 people (52.45%), history of disease is not at risk of hypertension as many as 49 people (59.8%), most respondents stress as many as 46 people (56.1%).

2. Bivariat Analysis

a. Effect of age on theHypertension Incidence

Table 4.4: Effect of age on theHypertension Incidence in the Papuan people in Yowari Hospital

No	Age	Hypertension Incidence				n	%
		Case		Control			
		n	%	n	%		
1	> 35 Years	31	75,6	21	51,2	52	63,4
2	≤35 Years	10	24,4	20	48,8	30	36,6
Total		41	100	41	100	82	100
p-value = 0,039; OR = 2,952; CI95% (1,154 – 7,556)							

Source: Data Primer, 2016

Table 4.4 shows that of the case of hypertension as many as 31 people (75.6%) aged> 35 the year and <35 years as many as 10 people (24.4%). While in the control group were 21 people (51.2%) aged> 35 years and <35 years as many as 20 people (48.8%). The test results on the value of chi square statistic significance of 95% (α = 0.05) was obtained p-value of 0.039 or p <α (0.05), thus no effect of age on theHypertension Incidence in Yowari Hospital. When viewed from the value of OR = 2.952; CI95% (1.154 to 7.556) which interpreted that age> 35 years over 1,788 times greater risk with hypertension compared with respondents aged <35 years.

b. Influence of Gender on the Genesis of Hypertension

Table 4.5: Influence of Gender on the Genesis of Hypertension in Papua People

No	Gender	Hypertension Incidence				n	%
		Case		Control			
		n	%	n	%		
1	Male	22	53,7	17	41,5	39	47,6
2	Female	19	46,3	24	58,5	43	52,4
Total		41	100	41	100	82	100
p-value = 0,376; OR = 1,635; CI95% (0,683 – 3,915)							

Source: Data Primer, 2016

Table 4.5 shows that of the case of hypertension as many as 22 people (53.7%) males and females as many as 19 people (46.3%). While in the control group were 17 (41.5%) male - male and female as many as 24 people (58.5%).

The test results on the value of chi square statistic significance of 95% (α = 0.05) was obtained p-value of 0.376 or p> α (0.05), thus there is no influence of gender on theHypertension Incidence in Yowari Hospital. When viewed from the value of OR = 1.635; CI95% (0.683 to 3.915), which was interpreted not meaningful.

c. Genesis Effect of Education on Hypertension

Table 4.6 shows that of the case of hypertension as many as 18 people (43.9%) lower education and higher education as many as 23 people (56.1%). While the control group of 20 people (48.8%) lower education and higher education as many as 21 people (51.2%).

The test results on the value of chi square statistic significance of 95% (α = 0.05) was obtained p-value of 0.825 or p> α (0.05), thus no education influence theHypertension Incidence in Yowari Hospital.

When viewed from the value of OR = 0.822; CI95% (0.345 to 1.960), which was interpreted not meaningful.

Table 4.6: Influence of Genesis Education Society of Hypertension in Papua in Yowari Hospital

No	Education	Hypertension Incidence				n	%
		Cases		control			
		n	%	n	%		
1	Low	18	43,9	20	48,8	38	46,3
2	High	23	56,1	21	51,2	44	53,7
Total		41	100	41	100	82	100
p-value = 0,825; OR = 0,822; CI95% (0,345 – 1,960)							

Source: Data Primer, 2016

d. Work influence of Genesis Hypertension

Table 4.7: Work influence of Genesis Society of Hypertension in Papua in Yowari Hospital

No	Occupation	Hypertension Incidence				n	%
		Case		Control			
		n	%	n	%		
1	Not Working	14	34,1	21	51,2	35	42,7
2	Working	27	65,9	20	48,8	47	57,3
Total		41	100	41	100	82	100
p-value = 0,180; OR = 0,494; CI95% (0,203 – 1,202)							

Source: Data Primer, 2016

Table 4.7 shows that of the case of hypertension as many as 14 people (34.1%) did not work and work as many as 27 people (65.9%). While in the control group were 21 people (51.2%) did not work and the work of 20 people (48.8%). The test results on the value of chi square statistic significance of 95% (α = 0.05) was obtained p-value of 0.180 or p> α (0.05), thus no effect on theHypertension Incidence jobs in Yowari Hospital. When viewed from the value of OR = 0.494; CI95% (0.203 to 1.202), which was interpreted not meaningful. Revenue influence of Genesis Hypertension.

Table 4.8 shows that of the case of hypertension as many as 23 people (56.1%) less revenues and earnings quite as many as 18 people (43.9%). While in the control group were 29 people (70.7%) less revenues and earnings quite as many as 12 people (29.3%). The test results on the value of chi square statistic significance of 95% (α = 0.05) was obtained p-value0,252 or p> α (0.05), thus no revenue effect on theHypertension Incidence in Yowari Hospital. When viewed from the value 0.539; CI95% (0.212 to 1.317), which was interpreted not meaningful.

Table 4.8: Revenue influence of Genesis Hipertensipada Papuadi Community Hospital Yowari

No	Revenue/Income	Incidence of Hypertesion				n	%
		Case		Control			
		n	%	n	%		
1	Less	23	56,1	29	70,7	52	63,4
2	Enough	18	43,9	12	29,3	30	36,6
Total		41	100	41	100	82	100
p-value = 0,252; OR = 0,539; CI95% (0,212 – 1,317)							

Source: Data Primer, 2016

d. Genetic influence on theHypertension Incidence

Table 4.9: Genetic influence of Genesis Hipertensipada Papuan people in Yowari Hospital

No	Genetic	Hypertension Incidence				n	%
		Cases		Control			
		N	%	n	%		
1	Exist	27	65,9	11	46,3	38	46,3
2	Not Exist	14	34,1	30	53,7	44	53,7
Total		41	100	41	100	82	100
p-value = 0,001; OR = 5,260; CI95% (2,043 – 13,539)							

Source: Data Primer, 2016

Table 4.9 shows that of the case of hypertension as many as 27 people (65.9%) there are genetic descendants of hypertension and no as many as 14 people (34.1%). While in the control group were 38 people (46.3%) there are no descendants of hypertension and as many as 12 people (29.3%). The test results on the value of chi square statistic significance of 95% ($\alpha = 0.05$) was obtained p-value of 0.01 or $p < \alpha$ (0.05), thus there is a genetic influence on theHypertension Incidence in Yowari Hospital. When viewed from the value of OR = 5.260; CI95% (2.043 to 13.539) interpreted the respondents with a history of genetic risk for hypertension by 5.260 times greaterHypertension Incidence compared to no genetic history of hypertension.

Influence Activities Fisikterhadap Genesis Hypertension

Table 4.10 shows that of cases of hypertension were 28 people (68.3%) less physical activity and physical activity quite as many as 13 people (31.7%). While the control group of 15 people (36.6%) less physical activity and physical activity quite as many as 26 people (63.6%). The test results on the value of chi square statistic significance of 95% ($\alpha = 0.05$) was obtained p-value of 0.001 or $p < \alpha$ (0.05), thus there fisikterhadap activity

influence theHypertension Incidence in Yowari Hospital. When viewed from the value of OR = 3.733; CI95% (1.496 to 9.318) as interpreted by the respondents fisikkurang activity increased risk of hypertension 3.773 times greater compared with no genentik hypertension. Effect of obesity on theHypertension Incidence.

Table 4.10: Effect of Physical Activity on Hipertensipada Genesis Community Hospital Papuadi Yowari

No	Physical Activity	Hypertension Incidence				n	%
		Case		Control			
		n	%	N	%		
1	Less	28	68,3	15	36,6	43	52,4
2	Enough	13	31,7	26	63,4	39	47,6
Total		41	100	41	100	82	100
p-value = 0,008; OR = 3,733; CI95% (1,496 – 9,318)							

Source: Data Primer, 2016

Table 4.11: Obesity influence of Genesis Physical Society of Hypertension in Papua in Yowari Hospital

No	Obesity	Hypertension Incidence				n	%
		Case		Control			
		n	%	N	%		
1	Obesity	26	63,4	13	31,7	39	47,6
2	Ideal	15	36,6	28	68,3	43	52,4
Total		41	100	41	100	82	100
p-value = 0,008; OR = 3,733; CI95% (1,496 – 9,318)							

Source: Data Primer, 2016

Table 4.11 shows that of Hypertension Incidences as many as 26 people (63.4%) of obesity and ideal as many as 15 people (63.6%).

While in the control group were 13 (31.7%) of obesity and obesity are not as many as 26 people (63.6%). The test results on the value of chi square statistic significance of 95% ($\alpha = 0.05$) was obtained p-value of 0.008 or $p < \alpha$ (0.05), thus there obesitasterhadap influence theHypertension Incidence in Yowari Hospital.

When viewed from the value of OR = 3.733; CI95% (1.496 to 9.318) as interpreted by the respondents at risk of obesity theHypertension Incidence 3.773 times larger compared to the ideal weight.

Effect of smoking on theHypertension Incidence

Table 4.12: Effect of smoking on the incidence Hipertensipada Papuadi Community Hospital Yowari

No	Smoking Habit	Hypertension Incidence				n	%
		Case		Kontrol			
		n	%	n	%		
1	Smoker	19	46,3	8	27	27	32
2	Not Smoker	22	53,7	33	77	55	67,1
Total		41	100	41	100	82	100
p-value = 0,019; OR = 3,563; CI95% (1,328 – 9,555)							

Source: Data Primer, 2016

Table 4.12 shows that of Hypertension Incidences as many as 26 people (63.4%) smoking and not smoking as many as 15 people (63.6%). While in the control group were 13 (31.7%) smoking and not smoking as many as 26 people (63.6%). The test results on the value of chi square statistic significance of 95% (α = 0.05) was obtained p-value of 0.008 or p <α (0.05), thus there merokokterhadap habits influence theHypertension Incidence in Yowari Hospital. When viewed from the value of OR = 3.563; CI95% (1.328 to 9.555) were interpreted repsponden to smoking risk of theHypertension Incidence 3,563 times greater compared with tidakada smoking.

e. Influence of Alcohol Drinking habits to theHypertension Incidence

Table 4.12: Influence of Alcohol Drinking Habit of Genesis Society of Hypertension in Papua in Yowari Hospital

No	Drinking Alcohol Habit	Hypertension Incidence				n	%
		Case		Control			
		n	%	n	%		
1	Risky	18	43,9	10	24,4	28	34,1
2	Not at risk	23	56,1	31	75,6	54	65,9
Total		41	100	41	100	82	100
p-value = 0,103; OR = 2,426; CI95% (0,945 – 6,227)							

Source: Data Primer, 2016

Table 4.12 shows that of the case of hypertension as many as 18 people (43.9%) drinking alcohol risky and not risky as dan23 people (56.1%). While the control group of 10 people (24.4%) drinking alcohol risky and not risky as many as 31 people (75.6%). The test results on the value of chi square statistic significance of 95% (α = 0.05) was obtained p-value of 0.103 or p <α (0.05), and thus no influence drinking habits alkoholterhadapHypertension Incidence in Yowari Hospital. When viewed from nilai2,426; CI95% (0.945 to

6.227), which was interpreted not meaningful.

Effect of Coffee Drinking habits to theHypertension Incidence

Table 4.13: Effect of Coffee Drinking Habits to Genesis Hipertensipada Papuadi Community Hospital Yowari

No	Drinking Coffee Habit	Hypertension Incidence				n	%
		Case		Control			
		n	%	n	%		
1	Risky	22	53,7	10	24,4	32	39
2	Not at risk	19	46,3	31	75,6	50	61
Total		41	100	41	100	82	100
p-value = 0,013; OR = 3,589; CI95% (1,401 – 6,227)							

Source: Data Primer, 2016

Table 4.13 shows that of Hypertension Incidences as many as 22 people (53.7%) have the habit of drinking coffee is risky and not risky as many as 19 people (46.3%). While on Controlsebanyak group of 10 people (24.4%) drinking coffee is risky and not risky as many as 31 people (75.6%). The test results on the value of chi square statistic significance of 95% ($\alpha = 0.05$) was obtained p-value of 0.013 or $p < \alpha$ (0.05), so there is coffee drinking habits influence theHypertension Incidence in Yowari Hospital. When viewed from nilaiOR = 3,589; CI95% (1.401 to 6.227) which is interpreted that the habit of drinking coffee has theHypertension Incidence risk 3,589 times greater than non-risk drinking coffee.

f. The influence of salt consumption on theHypertension Incidence

Table 4.14: Effect of Salt Consumption of Genesis Hipertensipada Papuan people in Yowari Hospital

No	Salt Consumption	Hypertension Incidence				n	%
		Case		Control			
		n	%	N	%		
1	Often	26	63,4	13	31,7	39	47,6
2	Not Often	15	36,6	28	68,3	43	52,4
Total		41	100	41	100	82	100
p-value = 0,008; OR = 3,733; CI95% (1,496 – 9,318)							

Source: Data Primer, 2016

Table 4.14 shows that the cases of hypertension were 26 people (63.4%) had frequent consumption of salt and often as many as 15 people (36.6%). While in the control group were 13 (31.7%) of salt consumption often and

often as many as 28 people (68.3%). The test results on the value of chi square statistic significance of 95% (α = 0.05) was obtained p-value of 0.008 or p <α (0.05), thus there is the effect of salt consumption on theHypertension Incidence in Yowari Hospital. When viewed from the value of OR = 3.733; CI95% (1.496 to 9.318) which interpreted that salt consumption often has theHypertension Incidence risk 3,733 times greater than that is not often the consumption of salt.

g. Effect of Disease History of Genesis Hypertension

Table 4.15: Effect of Disease History of Genesis Hipertensipada Papuadi Community Hospital Yowari

No	Disease History	Hypertension Incidence				n	%
		Case		Control			
		n	%	n	%		
1	Risky	25	61	8	18,5	33	40,2
2	Not at risk	16	39	33	80,5	49	49
Total		41	100	41	100	82	100
p-value = 0,000; OR = 6,445; CI95% (2,383 – 17,436)							

Source: Data Primer, 2016

Table 4:15 shows that of Hypertension Incidences as many as 25 people (61%) no history of the disease and no history of disease risk as much as 16 people (39%).

While the control group of 8 people (18.5%) no history of the disease and no history of disease risk as much as 33 people (80.5%).

The test results on the value of chi square statistic significance of 95% (α = 0.05) was obtained p-value of 0.000 or p <α (0.05), thus there riwayatpenyakit influence theHypertension Incidence in Yowari Hospital.

When viewed from the value of OR = 6.445; CI95% (2.383 to 17.436) interpreted that there is a history of disease risk for hypertension 6.445 times greater than no history of disease risk.

a. Effects of Stress on the Genesis of Hypertension

Table 4:16 shows that of Hypertension Incidences as many as 23 people (61%) with stressed and not stressed as much as 18 people (43.9%). While in the control group as many as 23 people (56.1%) of stress and not stressebanyak 18 (43.9%). The test results on the value of chi square statistic significance of 95% (α = 0.05) was obtained p-value of 0.000 or p <α (0.05) . This means that there stresterhadap influence theHypertension Incidence in Yowari Hospital. When viewed from the value of OR = 6.445; CI95% (2.383 to 17.436) interpreted that stress increased risk of hypertension 6.445 times greater than no stress.

Table 4.16: Effects of Stress on Hipertensipada Genesis Community Hospital Papuadi Yowari

No	Stress	Hypertension Incidence				n	%
		Case		Control			
		n	%	n	%		
1	Stress	23	56,1	23	56,1	46	56,1
2	Un stress	18	43,9	18	43,9	36	43,9
Total		41	100	41	100	82	100
p-value = 0,000; OR = 6,445; CI95% (2,383 – 17,436)							

Source: Data Primer, 2016

3. Multivariate Analysis

Multivariate analysis is used to obtain answers to the factors which influenced theHypertension Incidence, it is necessary to proceed on the bivariate and multivariate analysis. Modeling the bivariate included in a multivariate test with p values <0.25 were age, occupation, genetic, physical activity, obesity, smoking, drinking alcohol, drinking coffee, salt intake, history of the disease and depressed used logistic regression method backward where in each independent variable on the dependent variable was tested in stages. From the results of multivariate analysis can be seen in Table 4:17.Table 4.11 , the age, genetic, physical activity, obesity, salt consumption and disease history as a dominant factor in theHypertension Incidence.

Table 4.17: Variable Multiple Logistic Regression Analysis

No	Variable	B	*p-value*	OR	95% C. I. for Exp (B)	
					Lower	Upper
1	Age	3,482	0,003	32,536	3,364	314,687
2	Genetic	2,931	0,001	18,744	3,505	100,229
3	Physical Activity	1,882	0,017	6,567	1,408	30,631
4	Obesity	1,819	0,020	6,168	1,337	28,455
5	Salt Consumption	3,178	0,003	24,009	2,941	196,035
6	Disease History	1,958	0,013	7,085	1,513	33,172
	Constant	-22,917	0,000	0,000		

Source: Data Primer, 2016

4. Discussion

1. Effect of Age on the Genesis of Hypertension

The result showed that no effect of age on the incidence of hypertension in Yowari Hospital (p-value 0.039). The research result is in line with research conducted by Umami & Priyanto in 2013, generally occurs in hypertension in men over age 35 and in women, occurs after the age of 45 years.

Age is an old person's life to date, calculated from the date of birth by Hand in 2010. Increasing age can affect the occurrence of hypertension, it is proposed by [12] by the increasing of age, the likelihood of someone suffering from hypertension are also getting bigger. Hypertension is a disease that arises due to the interaction of various risk factors for the onset of hypertension.

The results of the analysis of the cases of hypertension found that as many as 31 people (75.6%) aged> 35 years and <35 years as many as 10 people (24.4%). While in the control group were 21 people (51.2%) aged> 35 years and <35 years as many as 20 people (48.8%). This shows that the older the more it tends risk for kejadianhipertensi. The test results OR = 2.952; CI95% (1.154 to 7.556) which interpreted that age> 35 years over 1,788 times greater risk with hypertension compared with respondents aged <35 years.

This is consistent with the theory put forward by [19], that the most dominant hypertensive disease in the age group 31-55 years. This is because as we get older, the blood pressure will increase. Hypertensive disease generally develops when a person reaches middle age that is likely to increase, especially over the age of 40 years even at the age of 60 years and above. In general, hypertension in men over the age of 35 years, whereas in women occur after the age of 45 years (menopause).

2. Effect of Gender on the Genesis of Hypertension

The result showed that there was no influence of gender on theHypertension Incidence in Yowari Hospital (p-value 0.376). The results of this study are consistent with the research by Sulityowati [8] that there was no influence of gender to the hypertension.

Gender differences in sexuality are the reproductive organs which differentiate between male and female [9]. The results obtained the analysis that Hypertension Incidences as many as 22 people (53.7%) males and females as many as 19 people (46.3%). While in the control group were 17 (41.5%) male - male and female as many as 24 people (58.5%). This shows that women and men - the same man - the same risk of theHypertension Incidence.

According to Sutrasni [10], one in five men aged between 35-44 have high blood pressure. The prevalence of hypertension in men will be doubled at the age of 45-55 years. This is because due to hormonal changes, stress state, fatigue, and food consumption patterns that are not controlled. Whereas in women, over the age of 55 years of their greater chance of developing hypertension. This is because in women increases with age where the past premenopausal women tend to have higher blood pressure than men

The results showed that men who work (68.1%) while women are as much (31.9%). Recently, women the equal opportunity in working. According Nurmalina [11], the occupation is an activity that does not pleasure and stressful. Thus the chances of the men and women alike - at an increased risk of hypertension.

This is in accordance with the opinion of Sutanto [12], that men and women have relatively equal opportunities suffer from hypertension, which is likely due to that the majority of women at this time was working, so it can affect psychological states, such as stress. With these circumstances will increase the risk of hypertension. Along with age, a person's blood pressure to be increased.

3. Effect of Education on the Genesis of Hypertension

The result showed that there was no influence of education on theHypertension Incidence in Yowari Hospital (p-value 0.825). The results of this study are not consistent with research Sulistiyowati [8] mentions educational factors affect theHypertension Incidence.

Education requires people to do and fill his life to attain salvation and happiness. Education is needed to get information, for example, things that support health so as to improve the quality of life. Thus it can be interpreted that the higher one's education, then the easier to receive information so that the more knowledge he has, otherwise less education would hinder the development of one's attitude to the values that were introduced [13].

Results of the analysis showed that Hypertension Incidences as many as 18 people (43.9%) lower education and higher education as many as 23 people (56.1%). While the control group of 20 people (48.8%) lower education and higher education as many as 21 people (51.2%). This suggests that high and low education levels have the same risk of developing hypertension.

According WHO, the level of education will be influenced by the work gained and the general level of education to get a job in the formal needs enough revenue.

Their economic status either make someone can buy primary needs and other needs, including the needs of food and even excessive, so the risk of the occurrence of excessive nutritional status and risk for hypertension. While a person with low education affect the kind of work that procures and generally have jobs with low incomes. Low economic status affect the access to health services, resulting in a risk to health. [14,15].

This is in line with research by Shea [16] reported in 92% patients with uncontrolled hypertension, 86% reported having health care services to independently without insurance or the free payments. In a multivariable study in a city and part of the population, also emphasized the contribution of health insurance ownership and low economic status is not enough to affect the blood pressure is not under control.

4. Effect of Employment of Genesis Hypertension

The result showed that there was no effect on theHypertension Incidence jobs in Yowari Hospital (p-value

0.180). The results are consistent with research by [8] that there is no effect against hypertension jobs.

Work is something you do for a living, livelihood . Work environment can make a person gain experience and knowledge, either directly or indirectly [17]. Results of the analysis showed that Hypertension Incidences as many as 14 people (34.1%) did not work and work as many as 27 people (65.9%). While in the control group were 21 people (51.2%) did not work and the work of 20 people (48.8%). This shows that a person who does not work and cooperate - equally likely to have hypertension. It can be caused that someone working under pressure is practiced psychic work so fast to make depression. While someone who did not work was not able to meet their needs, leading to psychological disorders due to the economics of the burden felt.

5. Revenue

Revenue is defined by Nototatmodjo in 2011 as the wage that obtained from the results of work to meet their needs. The analysis results were obtained that Hypertension Incidences as many as 23 people (56.1%) less revenues and earnings quite as many as 18 people (43.9%). While in the control group were 29 people (70.7%) less revenues and earnings quite as many as 12 people (29.3%). It the same opportunities in less shows that revenue and fairly with risk for incident of hypertension.

The absence of the income effect against hypertension due to respondents who have sufficient income, but with a healthy lifestyle patterns can control food needs are balanced. While someone with less opinion tertiary certainly not meet the needs of food, so it is not able to buy more food needs.

6. Effect of Genesis Genetics of Hypertension

The result showed that there is a genetic influence on theHypertension Incidence in Yowari Hospital (p-value 0.001). The results are consistent with research by [8], that was a genetic influence on theHypertension Incidence.

Heredity or genetics is the inheritance of genetic characteristics from parents. If a person has a parent that one of them suffer from hypertension, then the person at greater risk for developing hypertension than those whose parents were normal (not suffer from hypertension). However, it does not mean that all who have hypertension descendants will surely suffer from hypertension [12].

Results of the analysis showed that Hypertension Incidences as many as 27 people (65.9%) there are genetic descendants of hypertension and no many as 14 people (34.1%). While in the control group were 38 people (46.3%) there are no descendants of hypertension and as many as 12 people (29.3%). This indicates that respondents who had a family history of hypertension tend to be at risk for hypertension. The test results OR = 5.260; CI95% (2.043 to 13.539) interpreted the respondents with a history of genetic risk for hypertension by 5.260 times greaterHypertension Incidence compared to no genetic history of hypertension.

This is consistent with the theory put forward by Gunawan [18], that from the statistical data proved that someone will have a greater chance to get hypertension if parents are hypertensive. 70-80% of cases of essential

hypertension derived by the parents. If a history of hypertension in both parents obtained allegation or essential hypertension is greater in monozygotic twins (one egg) and one of them suffer from hypertension then that person is likely to suffer from hypertension [19].

7. Effect of Physical Activity on the Genesis of Hypertension

The result showed that there was the influence of physical activity on theHypertension Incidence in Yowari Hospital (p-value 0.001). The results are consistent with research by Rabaity & Sulchan in 2012, that there is influence of physical activity to theHypertension Incidence. According to Mannan and his colleagues in 2012, physical activity is a movement made by the body's muscle and its supporting systems. While Nurmalina [11], divides physical activity, classified mild, moderate and severe.

The results showed that 47.6% do enough physical activity by the respondent. Physical activity like a game of volleyball or mini football is usually played between groups. If this activity is often done, this led to the preservation of the balance of the ideal weight. The respondent who does not perform activities such as watching television, sleeping, following extracurricular activities, tutoring courses and consuming many foods that are sweet and high anergy and low in nutrients can cause the obesity and have a tendency 30-50% develop hypertension than those who are active.

The results obtained by analysis of that Hypertension Incidences were 28 people (68.3%) less physical activity and physical activity quite as many as 13 people (31.7%). While the control group of 15 people (36.6%) less physical activity and physical activity quite as many as 26 people (63.6%). It shows the proportion of respondents who hypertension in less physical activity. The test results OR = 3.733; CI95% (1.496 to 9.318), which interpreted the respondents with less risk of physical activity on theHypertension Incidence 3.773 times greater compared with no genentik hypertension.

Lack of physical activity increases the risk of suffering from hypertension due to increased risk of being overweight and having a frequency higher heart rate so that the heart muscle has to work harder to pump and the greater the pressure on the arteries. During physical activity, muscles need energy to move beyond the metabolism, while the heart and lungs require additional energy to deliver nutrients and oxygen throughout the body and to remove the remains of the body [22].

8. Effect of obesity on theHypertension Incidence

The results were obtained that there is influence of obesity on theHypertension Incidence in Yowari Hospital (p-value 0.008). The results are consistent with research by Boediono in 2015, that there is the influence of obesity on theHypertension Incidence.
Obesity is excess weight as a result of excessive accumulation of body fat [11]. Meanwhile, according to WHO [14] in Supariasa [20] to measure body fat include the body mass index (BMI).

The analysis results were obtained that there are 26 cases of hypertension (63.4%) of obesity and ideal as many as 15 people (63.6%). While in the control group were 13 (31.7%) of obesity and obesity are not as many as 26

people (63.6%). This shows that theHypertension Incidence tended to obesity risk. The test results OR = 3.733; CI95% (1.496 to 9.318) as interpreted by the respondents at risk for hypertension obrsitas 3.773 times greater compared with no genentik hypertension.

It is also revealed by Alam and his colleagues [21], that the body mass index (BMI) excessive experiencing pre hypertension (40%) and IMT are obese tend to have blood pressure of stage I and stage II (7%) and a risk 1,112 times great to have hypertension than patients who had a normal BMI.

Although it is not certain influence between hypertension and obesity, but proved that the power of the heart pumps and circulating blood volume of obese people with hypertension was higher than hypertensive patients with normal weight.

9. The effect of smoking on theHypertension Incidence

The results were obtained that there are effects of tobacco smoke on the Hypertension Incidence in Yowari Hospital (p-value 0.008). The results are consistent with research by Mannan and his colleagues [22] report that smoked ≥20 cigarettes / day smoked ≥10 years old and 2.32 times risk to suffer from hypertension. While Oroh [16], smoking habit has a chance 6 times more likely to suffer from hypertension compared to respondents who do not have the habit of smoking.

Cigarettes are chopped tobacco wrapped in paper length measuring 7-20 cm. Cigarette contains more than 4000 elements, 200 of which are harmful to health. The main toxins in cigarettes are tar, nicotine, and carbon monoxide (CO), other than that in cigarettes also contain other chemicals that are highly toxic [23].

Results of the analysis showed that there are 26 cases of hypertension (63.4%) of obesity and ideal as many as 15 people (63.6%). While in the control group were 13 (31.7%) of obesity and obesity are not as many as 26 people (63.6%). This indicates a high risk on smoking and hypertension. The test results OR = 3.563; CI95% (1.328 to 9.555) were interpreted responden to smoking risk of theHypertension Incidence 3,563 times greater compared with no smoking habit.

This concurs Sheldon [24], with a person smokes two rods then systolic and diastolic pressure will increase to 10 mmHg. Blood pressure will remain at this height until 30 minutes after quitting smoking cigarettes. As for the heavy smoker blood pressure will be at a high level throughout the day.

Cigarette is inhaled can cause the increasing of blood pressure. Smoking can cause vasoconstriction perifer vessels and vessels in the kidneys so it increases the blood pressure. By smoking one cigarette will rise the blood pressure or hypertension. This can be caused by CO gas produced by cigarette can cause blood vessels get "cramps" so the blood pressure inceases, and the vessel walls torn [23].

10. Influence of Alcohol Drinking habits to theHypertension Incidence

The results showed that drinking alcohol habit has no influence to theHypertension Incidence in Yowari

Hospital (p-value 0.103). The results of this study are not consistent with research conducted by Oroh (2012), reveals that there is an influence of alcohol drinking with hypertension.

Alcohol is an active substance contained various types of liquor agent containing ethanol depress the central nervous system functioning. However, when used in low doses of alcohol actually makes the body feel fresh (stimulating). Alcohol is the substance most widely used and abused as socially acceptable. It is understood that our society has a certain type of beverage that contains alcohol. The using effect depends on the amount consumed, the physical size of the wearer and the user's personality.

The results of the analysis of the cases of hypertension found that as many as 18 people (43.9%) risk of drinking alcohol and not at risk as many 23 people (56.1%). While the control group of 10 people (24.4%) drinking alcohol risky and not risky as many as 31 people (75.6%). This shows that theHypertension Incidence equal at risk among respondents who do not drink alcohol and drinking alcohol.

No influence on drinking alcohol in Papua community can be caused that respondents who drink alcohol risk are not routinely taken every week although done every month. In addition, respondents who did not consume alcohol at risk from other factors like salt consumption and smoking habits.

This is in accordance with the opinion that alcohol can boost blood pressure. Because it is 90 millimeters per week is the upper limit may be consumed. The size is equal to 6 cans of beer = 360 milliliters or 6 glasses of wine = 120 milliliters. Limit as safely possible range of 2 units a day (1 unit can be 1 shot glass of liquor, a glass of wine, or a pint of beer). But it would be better if people with hypertension do not consume alcohol at all.

11. Influence of Coffee Drinking habits to theHypertension Incidence

The results were obtained that there is influence of coffee drinking habits to theHypertension Incidence in Yowari Hospital (p-value 0.013). Research in the United States conducted by Cuno Uiterwaal and his colleagues in 2007 shows that subjects who did not used to drink coffee have a lower blood pressure when compared with subjects who consumed 1-2 cups of coffee per day. Someone who consume 2-6 cups of coffee per day has higher blood pressure when compared to the one who consume 1-2 cups per day. While research by Martiani [26], men who consumed coffee> 6 cups per day even has lower blood pressure when compared to subjects that consume 3-6 cups of per day.

The results of the analysis of the cases of hypertension found that as many as 22 people (53.7%) have the habit of drinking coffee is risky and not risky as many as 19 people (46.3%). While the control group of 10 people (24.4%) drinking coffee is risky and not risky as many as 31 people (75.6%). This shows that the proportion of hypertension in the habit of drinking coffee is risky. Hasilujidiperoleh value of OR = 3.589; CI95% (1.401 to 6.227) which interpreted that drinking habits have a risk of theHypertension Incidence 3,589 times greater compared do not have the habit to drink alcohol.

Coffee is a beverage that has been consumed since the days of fathers and now coffee is one of the world's

favorite beverage, with the consumption of 6.7 million tons per year. Coffee slightest influence on the blood pressure that will have an impact on public health, because coffee is consumed widely in society. Influence of coffee on the Hypertension Incidence is still controversial. Coffee can affect blood pressure for their polyphenols, potassium, and the caffeine contained in it. Polyphenols and potassium tend to decrease the blood pressure. Polyphenols inhibit the function of vascular atherogenesis. Potassium lowers systolic blood pressure by inhibiting renin release and diastolic resulting in increasing secretion sodium and water. This causes a decrease plasma volume, cardiac output, and peripheral pressure so that the blood pressure will decrease. Cafein has the effect of competitive antagonist of the receptor neuromodulators adenosin. Adenosin is a neuromodulator a that affect number of functions in the central nervous. This resulted in an vasoconstriction and peripheral resistance, which will lead to high blood pressure [26].

12. The effect of salt consumptionon to theHypertension Incidence

The results were obtained that three is an effect of salt consumption on theHypertension Incidence in Yowari Hospital (p-value 0.008). The results are consistent with research in line with research conducted by Mahmudah [27] Sawangan Baru Kota Depok 2015.

Healthy food is basically balanced diet and appropriate physical activity of each individual. Foods containing salt (sodium) is high generally found in many processed foods such as cheese, canned foods, salted fish, sausage and others. In restrictions to sodium, salt, sodium should be limited in the baking soda, baking powder, natriumbenzoat, and MSG [8].

Salty foods are foods that contain sodium (salt) is consumed by many people as a flavor enhancer in food. The consumption of salty foods in this study was measured by asking the frequency of the use of salt in food once a week. Category frequently if the frequency of consumption of more than 3 times a week all kinds of salty foods commonly consumed by the respondent.

The results of the analysis of the cases of hypertension found that as many as 26 people (63.4%) had frequent consumption of salt and often as many as 15 people (36.6%). While in the control group were 13 (31.7%) of salt consumption often and often as many as 28 people (68.3%). This shows that the proportion of salt consumption are often higher or excessive suffering from hypertension. From the results of OR = 3.733; CI95% (1.496 to 9.318) which interpreted that salt consumption often has theHypertension Incidence risk 3,733 times greater than that is not often the consumption of salt.

WHO recommends limiting consumption of salt to 6 grams per day, equivalent to 2400 mg Sodium [28]. Sodium chloride contained along the normal amounts of salt can help the body maintain fluid balance of the body to regulate blood pressure. However sodium in excess amounts can hold water (retention), thereby increasing blood volume. As a result, the heart has to work harder to pump and blood pressure to rise.

5. Conclusion

1. There is the influence of age on theHypertension Incidence in Yowari Hospital (p-value 0.039 OR =

2.952; CI95% = 1.154 to 7.556).

2. There is no effect of gender on theHypertension Incidence in Yowari Hospital (p-value 0.376; OR = 1.635; CI95% = 0.683 to 3.915)
3. There was no effect of education on theHypertension Incidence in Yowari Hospital (p-value 0.825; OR = 0.822; CI95% = 0.345 to 1.960)
4. There was no effect of work on theHypertension Incidence in Yowari Hospital (p-value 0.180; OR = 0.494; CI95% from 0.203 to 1.202)
5. No revenue effect on theHypertension Incidence in Yowari Hospital (p-value0,252; 0.539; CI95% (0.212 to 1.317)
6. There is a genetic influence on theHypertension Incidence in Yowari Hospital (p-value 0.001; OR = 5.260; CI95% (2.043 to 13.539)
7. There is an influence of physical activity on theHypertension Incidence in Yowari Hospital (p-value = 3.733 0,001OR; CI95% (1.496 to 9.318)
8. There is an effect of obesity on theHypertension Incidence in hospitals Yowar (p-value 0.008) OR = 3,733; CI95% (1.496 to 9.318)
9. There is an effect of smoking on theHypertension Incidence in Yowari Hospital (p-value 0.008; OR = 3.563; CI95% = 1.328 to 9.555).
10. There is an influence of drinking alcohol to theHypertension Incidence in Yowari Hospital (p-value 0.103; OR = 2.426; CI95% = 0.945 to 6.227)
11. There is influence an of coffee drinking habits to theHypertension Incidence in Yowari Hospital (p-value 0.013) OR = 3,589; CI95% = 1.401 to 6.227)
12. There is an influence of history of the disease to theHypertension Incidence in Yowari Hospital (p-value 0.000; OR = 6.445; CI95% = 2.383 to 17.436)
13. There is an effect of stress on theHypertension Incidence in Yowari Hospital (p-value 0.000; OR = 6.445; CI95% = 2.383 to 17.436).
14. Multivariate analysis obtained by age, genetics, physical activity, obesity, salt intake, and history of the disease is a dominant factor in theHypertension Incidence.

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