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**BMI AS THE DOMINANT FACTOR OF HYPERTENSION IN INDONESIA BASED
ON INDONESIAN FAMILY LIFE SURVEY (IFLS) 5**

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Objectives: Nowadays, non-communicable diseases are the leading cause of death and need to be considered across multiple sectors. Hypertension is one of non-communicable disease that significantly increased in Indonesia. Based on Indonesia Basic Health Research in 2018, prevalence of hypertension in Indonesia was 34.11%, higher than research in 2013 (25.8%). Uncontrolled hypertension may increase the risk factor for other diseases such as chronic kidney disease. The purpose of this study is to determine the dominant factor of hypertension in Indonesia.

Methods: This is a cross-sectional study that used secondary data from Indonesian Family Life Survey (IFLS) 5 in 2014-2015. Respondents of this study were 7.085 people over 18 years old.

Results: This study indicated that prevalence of hypertension in respondents over 18 years old was 13.5%. Bivariate analysis showed that **age** ($p=0.0001$; $OR=2.773$; $95\%CI = 2.322-3.312$), **sex** ($p=0.0001$; $OR=0.531$; $95\%CI = 0.416-0.678$), and **BMI** ($p=0.0001$; $OR=3.199$; $95\%CI = 2.777-3.685$) had a significant association with hypertension. The results showed that the respondents over 60 had a higher incidence rate of hypertension. Similar result was found in female respondents. Furthermore, respondents who have BMI >23 kg/m² to be likely have hypertension as well. Based on multivariate analysis, BMI ($p=0.0001$; $OR=2.906$; $95\%CI = 2.499-3.379$) was the dominant factor of hypertension. Thereafter, respondents with hypertension tend to exposed with chronic kidney disease ($p=0.038$; $OR=1.607$; $95\%CI = 1.049-2.463$).

Conclusions: Maintain a healthy body weight with BMI between 18.5 and 22.9 may reduce to a normal blood pressure and lowering the risk of chronic kidney disease.

Table 1. Univariate Analysis

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Variable	N	%
Kidney Disease		
Yes	136	1.9
No	6949	98.1
Hypertension		
Yes	955	13.5
No	6130	86.5
Age		
≥60 years old	755	10.7
<60 years old	6330	89.3
Sex		
Male	6674	94.2
Female	411	5.8
BMI		
Overweight	2658	37.6
Normal	4402	62.4

Table 2 and 3. Bivariate and Multivariate Analysis

Table 2. Bivariate and Multivariate Analysis

Variable	Bivariate		Multivariate	
	OR (95% CI)	p	OR (95% CI)	p
Age	2.773 (2.322-3.312)	0.0001	0.532 (0.405-0.699)	0.0001
Sex	0.531 (0.416-0.678)	0.0001	0.941 (0.934-0.948)	0.0001
BMI	3.199 (2.777-3.685)	0.0001	2.906 (2.499-3.379)*	0.0001

*the dominant factor of hypertension

Table 3. Bivariate Analysis of Kidney Disease

Variable	Bivariate	
	OR (95% CI)	p
Hypertension	1.607 (1.049-2.463)	0.038