AGE AND GENDER WITH DEGREE OF HYPERTENSION IN ADULTS AT THE CARDIOLOGY CLINIC OF GOTONG ROYONG HOSPITAL IN SURABAYA

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ABSTRACT

Introduction : Hypertension is a condition that blood pressure in a person increases with systolic 140 mmHg and/or diastolic 90 mmHg, either based on clinical measurements or health care facilities. Hypertension is often called a "silent killer". Risk factors associated with the incidence of hypertension include age and gender.

Purpose : To examine the correlation between age and degree of hypertension in adults and the correlation between gender and degree of hypertension in adults at the Cardiology Clinic of Gotong Royong Hospital in Surabaya.

Method : This research used an analytical observational method with a cross-sectional design. Data accumulation was obtained through medical records from the Cardiology Clinic of Gotong Royong Hospital in Surabaya. This research used simple random sampling as the sampling technique. Meanwhile, the expected analysis results from this research are p-value ≤ 0.05 and r value $= 0.8 - 1.00$.

Results : The result of analysis after *the Spearman test* about the correlation between age and degree of hypertension in adults at the Cardiology Clinic of Gotong Royong Hospital in Surabaya this research found p value $= 0.938$ which is interpreted as a non-significant correlation and r value $= 0.012$, which is interpreted as a very weak correlation. Then, the result of the analysis of the correlation between gender and degree of hypertension in adults at the Cardiology Clinic of Gotong Royong Hospital in Surabaya had a p-value $= 0.632$, which is interpreted as a non-significant correlation and an r value $= -0.072$, which is interpreted as very weak correlation.

Conclusion : There is no correlation between age and degree of hypertension in adults, nor between gender and degree of hypertension in adults at the Cardiology Clinic of Gotong Royong in Surabaya.

Keywords : Hypertension, age, gender, degree of hypertension.

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INTRODUCTION

According to the PERHI 2021 consensus, hypertension is a condition of increased blood pressure with systolic ≥ 140 mmHg and/or diastolic ≥ 90 mmHg based on clinical measurements.[1] The NCD-RisC study found a two-fold increase in the incidence of hypertension in 29 years due to poor treatment and low awareness regarding re-control in several countries, including Indonesia.[2] The 2018 Riskesdas report revealed 63,309,620 cases of hypertension in Indonesia, with 427,218 deaths.[3] Number of sufferers in East Java Province aged over 15 years was 11,008,334 people, with a percentage of 48.83% men and 51.17% women. Surabaya City contributes the second most case of hypertension, with 84 cases in 2020.[4] Surabaya City Health Office obtained an estimate of the number of hypertension cases in Sukolilo District, as many as 26,595 cases of hypertension, and one of the hospitals in there is Surabaya Gotong Royong Hospital.[5]

Lindsey and Jennifer's (2018) study in the United States proved that men dominated cases of hypertension before the age of 75, while at 75 it was more common in women.[6] Meanwhile, Katherine et al.'s research (2020) revealed that adults who are at high risk of suffering from hypertension, besides the elderly, are adults. Cases of hypertension are known to reach 1.4 billion or 31.1% of the total adult population in the world in 2010.[7] This can still increase due to bad behavior and lifestyle in adults. Therefore, the researchers made this study aimed at examining the correlation between age and degree of hypertension in adults and the correlation between gender and degree of hypertension in adults at the Cardiology Clinic of Gotong Royong Hospital in Surabaya.

METHOD

This study uses a research design in the form of cross-sectional, and the sampling technique is simple random sampling. According to the inclusion and exclusion criteria, the research sample was 47 hypertensive patients aged 26-45 years who checked themselves during outpatient care at the Cardiology Clinic of Gotong Royong Hospital in Surabaya from January to September 2022. The research tool is a laptop capable of running Microsoft Excel and SPSS 26 programs for data processing. The research material is data contained in medical records. Data analysis in this research used the Spearman correlation test. The applicable research ethics consists of 4 ethical codes: beneficence, non-maleficence, confidentiality, and justice.[8]

RESULT

Table 1. Result of Analysis Age and Degree of Hypertension

Table the Results of Analysis on the Correlation Between Age and Degree of Hypertension

Spearman's rho	Correlations		Age	Degree of Hypertension
Age	Correlations Coefficient		1,000	-0,012
	Sig. (2-tailed)			0,938
	N		47	47
Degree of Hypertension	Correlations Coefficient		-0,012	1,000
	Sig. (2-tailed)		0,938	
	N		47	47

Results of the analysis on the correlation between age and degree of hypertension in adults at the Cardiology Clinic of Gotong Royong Hospital in Surabaya obtained p value = 0.938 which was interpreted as a non-significant correlation, and the r-value = -0.012, which was interpreted as a very weak correlation. Therefore, the hypothesis can be rejected with the results of the analysis.

Table 2. Result of Analysis Gender and Degree of Hypertension

Table the Results of Analysis on the Correlation Between Gender and Degree of Hypertension

Spearman's rho	Correlations		Gender	Degree of Hypertension
Gender	Correlations Coefficient		1,000	-0,072
	Sig. (2-tailed)			0,632
	N		47	47
Degree of Hypertension	Correlations Coefficient		-0,072	1,000
	Sig. (2-tailed)		0,632	
	N		47	47

The result of analysis on the correlation between gender and degree of hypertension in adults at the Cardiology Clinic of Gotong Royong Hospital in Surabaya obtained p value = 0.632 which was interpreted as a non-significant correlation, and the r-value = -0.072, which was interpreted as a very weak correlation. Therefore, the hypothesis can be rejected with the results of the analysis.

DISCUSSION

Research by Damaris et al.'s (2019) and Beatrice et al.'s (2015) in Africa found that risk factors for hypertension, such as a bad lifestyle (smoking habits, alcohol consumption, high-fat meat consumption, infrequent exercise or physical activity), obesity and genetics are the main risk factors that can cause hypertension in adults aged 18-64 years.[9,10] This raises an assumption that the possibility of age and gender factors in increasing the degree of hypertension has not had a major effect on adults in the Cardiology Clinic of Gotong Royong Hospital in Surabaya. Furthermore, the results of this study were different because hypertension is a complex disease caused by a combination of two or more risk factors in a person's body.[11] This raises an assumption that the possibility of the multivariate analysis method is more suitable for this research. Another assumption is the possibility of medical records that inability to eliminate confounding factors, such as genetics or family history and a bad lifestyle (smoking habits, alcohol consumption, and infrequent exercise or physical activity), affecting the results of this research.[12,13]

CONCLUSION

1. The correlation between age and degree of hypertension in adults at the Cardiology Clinic of Gotong Royong Hospital in Surabaya shows that the correlation is not significant or the correlation is very weak

2. The correlation between gender and degree of hypertension in adults at the Cardiology Clinic of Gotong Royong Hospital in Surabaya shows that the correlation is insignificant or very weak

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