

## Socio-Economic Analysis and Ownership of Health Insurance in the Utilization of Health Facilities for Elderly with Hypertension

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**Abstract.** Hypertension is the most common occurrence for the elderly in Jambi City with an increasing trend in the last three years. However, the utilization of health facilities, especially for outpatient hypertension, has had its ups and downs. This study aims to analyze the effect of socioeconomic, and insurance ownership on the utilization of health facilities for outpatient hypertension in the work area of Simpang IV Sipin Health Center Jambi City in 2022. This study is a quantitative study using a cross-sectional design. The sample amounted to 110 respondents who were selected using accidental sampling technique. The instrument used is a questionnaire. Data processing using statistical software with univariate analysis stage, bivariate analysis with chi-square test, and multivariate analysis with multiple logistic regression test. The results of the study show that there is an effect of employment status, income, costs and ownership of health insurance on the utilization of health facilities for the elderly with hypertension in Jambi City in 2022. The conclusion of the study is that income and ownership of health insurance are the main triggers that affect the use of health facilities for outpatient treatment elderly with hypertension in Jambi City.

**Keywords:** *Socio-Economic, Health Insurance, Health Facilities, Elderly, Hypertension*

### INTRODUCTION

Hypertensive disease is the most common disease suffered by the elderly with an increasing trend from 2016 at 13,69% to 2020 at 23,63% and ranks first as the highest incidence of disease in Jambi Province (Ministry of Health 2021). In Jambi City, a similar condition also occurred where in 2020 there were 17.289 cases and an increase in 2021 to 25.846 cases.

The increase in the incidence of hypertension is not accompanied by an increase in the utilization of health facilities for outpatient treatment, especially in the elderly. The elderly as an age group with a high risk of disease are a group that should utilize health facilities more than age groups with lower risk. Hypertension is a medical condition that often shows no obvious symptoms and can increase the risk of heart disease, stroke, and other health problems in the elderly (Ministry of Health 2018).

The benefits of controlling blood pressure, preventing complications, treating hypertension, helping to extend the life expectancy of the elderly, and improving the quality of life can be felt by the elderly if they routinely utilize health facilities to treat hypertension (Alam and Jama 2020). Health facilities are facilities or places used to provide health services to the community. Health facilities can be in the form of hospitals, health centers, clinics, pharmacies, and health laboratories, equipped with medical equipment, medical personnel, and management systems needed to provide quality health services to patients.

Especially for elderly patients, the Indonesian government has even provided facilities and facilities in special health services for the elderly through health centers and Elderly Integrated Healthcare Center. However, the utilization of health services by the elderly for promotive, preventive, and curative efforts is still less than optimal. Several factors influence the elderly to come and utilize health services, such as decision-making factors, sources of financing, service quality, access to distance, access to transportation, and perceptions related to symptoms that affect the elderly coming to health services (Vinsur and Sutiarysih 2019).

Utilization of health facilities as health service providers at both the first and advanced levels has fluctuated. In 2014 the utilization of health facilities in Indonesia was only 27.1%. In Jambi Province the number of health facilities continues to increase yearly, totaling 396 facilities in 2018. In Jambi City, there are 20 Puskesmas as first-level facilities, but the utilization of Public health centers as a means of outpatient treatment, especially hypertension, is still not optimal.

There are many factors that influence a person's behavior in utilizing health facilities, including the elderly age group. Several previous studies have shown that social, economic, and health insurance ownership factors are determinants in a person's decision to utilize health facilities (Rabbaniyah and Nadjib 2019). Factors that influence the elderly in using health services to improve their quality of life are predisposing factors of age and education level (Fatimah 2019). Income and the need for health services are supporting factors for a person in utilizing health services (Budiono and Rivai 2021).

## **METHODS**

This study is a quantitative study using a cross-sectional design. The variables studied consisted of the dependent variable of health facility utilization while the independent variables consisted of socioeconomic and health insurance ownership. The study was conducted in the working area of the Simpang IV Sipin Health Center in Jambi City from July to December 2022. The selection of study sites was based on the category of areas with the highest prevalence of hypertension in Jambi City in 2022. The study population was all elderly people with hypertension in the Simpang IV Sipin Health Center working area. The study sample amounted to 110 respondents selected based on the accidental sampling technique. The instrument used was a questionnaire. Data processing and analysis using statistical software through the stages of univariate analysis, bivariate analysis with the chi-square test, and multivariate analysis with multiple logistic regression tests.

## **RESULTS AND DISCUSSION**

The results of the frequency distribution related to the characteristics and determinants of health facility utilization in the elderly with hypertension showed that as many as 110 respondents studied, most were in the age range of 61-70 years (48.2%) with the most gender being male (55.5%). Most respondents studied up to the university level (50.9%), but the majority of respondents were unemployed (52.7%) due to age factors that have entered the retirement age category. The average income of respondents was greater than the Jambi City minimum wage in 2022 (64.5%). The number of family members living in the same house with the respondents is more than 4 people or called a large family (70%) compared to a small family.

In insurance ownership status, it was found that most respondents had insurance (69.1%) while a small proportion of respondents who did not have insurance (30.1%) stated that they had joined the health insurance membership but stopped due to unwillingness to pay dues or premiums every month. 70% of respondents utilized health facilities for outpatient treatment of hypertension, but 30% of respondents did not utilize health facilities. The answer to the open-ended question on patients who do not utilize health facilities is that some respondents prefer to utilize herbal medicines for the treatment of hypertension, purchase over-the-counter medicines, and even do not seek treatment at all.

Respondents who utilized health facilities stated that most of the utilization of health facilities was carried out in the context of outpatient examinations and taking hypertension drugs at Puskesmas which were part of the chronic disease management program, Puskesmas Cooperation with BPJS (Social Security Agency of Health) Health funds, while the use of other health facilities such as hospitals, clinics or pharmacies was not carried out if it was not an emergency.

**Table 1. Socioeconomic Influence and Insurance Ownership on Health Facility Utilization in Elderly with Hypertension**

Variable	Utilization of (%)		OR (95% CI)	p- value
	No	Yes		
<b>Gender</b>				
– Male	10 (30.3)	51 (66.2)	2.186	0.00
– Female	23 (69.7)	26 (33.8)	(1.272-3.756)	1
<b>Education</b>				
– Low	32 (97.0)	77 (100.0)	1.031	0.12
– High	1 (3.0)	0 (0)	(0.971-1.095)	5
<b>Number of family members</b>				
– Big	6 (18.2)	27 (35.1)	2.430	0.07
– Small	27 (81.8)	50 (64.9)	(0.893-6.611)	7
<b>Jobs</b>				
– Working	24 (72.7)	12 (15.6)	3.095	0,00
– Not Working	9 (27.3)	65 (84.4)	(1.759 – 5.448)	
<b>Income</b>				
– Low	8 (24.2)	14 (18.2)	3.375	0.00
– High	25 (75.8)	63 (81.8)	(1.830-6.226)	0
<b>Insurance Ownership</b>				
– None	29 (87.9)	5 (6.5)	7.714	0.00
– There is	4 (12.1)	72 (93.5)	(3.073-19.368)	

In the chi-square test, it was found that elderly people of the male gender utilized more health facilities for hypertension treatment (66.2%) compared to female elderly patients (33.8%). The elderly in the low education category were more likely to utilize health facilities (100%) compared to the elderly in the high education category. The elderly who have a small family size (64.9%) were more likely to utilize health facilities for hypertension compared to the elderly with a large family size of more than 4 family members in one house (35.1%).

In the employment status of the elderly categorized as working status with non-working status, most of the elderly who are not working (84.4%) use more health facilities for hypertension treatment compared to the elderly who still have to work (15.6%). The income variable measured is the amount of average family income in one month. The results showed that elderly people with high-income categories (81.8%) utilized health facilities more than those with low-income categories (18.2%). The elderly who have health insurance utilize health facilities more (93.5%) compared to the elderly who do not have health insurance.

The results of bivariate analysis between independent variables and dependent variables found that there was an influence of gender ( $p=0.001$ ), occupation ( $p=0.000$ ), income ( $p=0.000$ ), and insurance ownership ( $p=0.000$ ) on the utilization of health facilities in the elderly with hypertension. Meanwhile, there is no effect of the number of family members ( $p=0.077$ ), and education ( $p=0.125$ ) on the utilization of health facilities in the elderly with hypertension. The analysis continued at the multivariate stage by selecting all independent variables with  $p\text{-value} < 0.25$  as candidates for multivariate modeling. Variables with  $p\text{-wald} > 0.05$  were excluded one by one starting from the highest p-wald acquisition value until  $p\text{-wald} \leq 0.05$  was obtained, taking into account changes in  $OR.Exp(B)$  of other variables in the model.

**Table 2. Multivariate Modeling Results of Health Facility Utilization Based on Socioeconomic Variables and Insurance Ownership**

Variables	<i>P-Wald</i>					<i>OR Exp (B)</i> (95% CI)
	Model 1	Model 2	Model 3	Model 4	Model 5	
Gender	0.861	-	-	-	-	
Education	-	-	-	-	-	
Jobs	0.198	0.181	0.198	0.636	-	
Number of Family Members	0.605	0.594	-	-	-	
Income	0.233	0.235	0.242	-	-	
Insurance Ownership	0.000	0.000	0.000	0.000	0.000	9.626 ( 2.247 – 14.237 )

Multivariate modeling showed that insurance ownership ( $p=0.000$ ) was the most dominant variable in influencing health facility utilization in the elderly with hypertension. Elderly with hypertension who have health insurance will be likely to utilize health facilities 9.6 times more than the elderly who do not have health facilities. Meanwhile, the utilization of health facilities is very necessary for the elderly with hypertension due to the latent nature of hypertension which

requires treatment over a long period of time. This needs to be considered by the government and BPJS (Social Security Agency of Health) to increase the coverage of health insurance participation, especially for the elderly.

The series of analyses in this study provides results that socioeconomic variables and insurance ownership variables have an important role in encouraging elderly people with hypertension to utilize health facility services. Socioeconomic factors according to the WHO survey (2013) affect health facility utilization in several ways. People with low income have limited access to health facilities due to distance or high costs. This may prevent them from seeking necessary health care. In addition, spending priorities from the economic side of the family determine that a person with a low income must prioritize spending on other needs such as food, education, and transportation. This can reduce the amount of money available for health care.

Several previous studies have shown similar results that income will influence a person in accessing health services (Maulany and Dianingati 2021). Income is closely related to the costs that must be incurred due to suffering from an illness. The hypertensive disease which is latent but requires long-term treatment will require relatively large medical expenses. It is known that the average cost incurred by hypertensive patients in Jambi City for the treatment and care of hypertension reaches IDR 1,060,000 (Solida et al. 2022). The components that makeup health costs for hypertension treatment are determined by the perspectives of patients, health care providers, and payers (insurance).

Therefore, in this case, the ownership of insurance to cover these costs is a factor that is proven to have an influence on the utilization of health facilities for the elderly with hypertension in Jambi City. The presence or absence of insurance ownership will be realized by elderly patients and families in understanding the overall economic burden of hypertension. Through consideration of benefit packages and other additional facilities covered by health insurance (Mulianingsih, Endarti, and Widayanti 2021).

Previous studies have shown that the elderly's membership in health insurance also affects the utilization of disease management programs (prolanis) from health facilities (Ginting et al. 2020). Households that have health insurance tend to utilize health facilities more often. Based on ownership of health insurance or insurance, household heads who have health insurance visit

health facilities the most (61.4%) for outpatient treatment compared to household heads who do not have health insurance (38.6%) (Rabbaniyah and Nadjib 2019). Meanwhile, it is different from previous studies which show that the attitudes and knowledge of elderly people with hypertension are related to elderly compliance in accessing treatment services (Indriani et al. 2021).

Having health insurance for seniors with hypertension is very important because hypertension is a medical condition that requires long-term and regular treatment. Seniors with hypertension will need ongoing medication and care to keep their blood pressure under control and prevent serious complications such as heart attack, stroke, kidney failure, or eye problems. In such situations, having health insurance can help seniors with hypertension to access timely and affordable health care. Health insurance can help cover health care costs such as routine check-ups, laboratory tests, medications, and hospitalization if needed.

## **CONCLUSIONS AND SUGGESTIONS**

As many as 70% of elderly people with hypertension have utilized health facilities for outpatient treatment but a small proportion still utilize herbal remedies, purchase over-the-counter medicines, and even do not undergo treatment at all. Socioeconomic variables; gender, occupation, and income are factors that influence the utilization of health facilities for the elderly with hypertension. Meanwhile, insurance ownership is the main trigger factor for elderly people with hypertension to utilize health facilities. Therefore, increasing the coverage of health insurance participation will have the opportunity to increase the utilization of health facilities by the elderly with hypertension.

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