

Healthcare Facilities Choice for Maternity Care in Indonesia: Do Socioeconomic Factors Affects?

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Abstract

The government encourages maternity care in health facilities to reduce maternal mortality. The study aims to analyze the impact of socioeconomic factors on healthcare facilities' choice for maternity care in Indonesia. The study used secondary data from the official report of the Indonesia Ministry of Health. The study takes all provinces as samples. Moreover, the study used the proportion of maternity care in health facilities as a dependent variable. On the other hand, the research analyzed four other variables as independent variables: percentage of the poor population, percentage of the population having health insurance, literacy percentage of population >15 years, and the unemployment rate for population >15 years. The study analyzed the data using a scatter plot. The study results show the lower the poor population in the province, the higher the proportion of maternity care in health facilities in that province. The higher the percentage of the population having health insurance in an area, the higher the proportion of maternity care in health facilities in that area. Meanwhile, the higher the literacy percentage of population >15 years in a province, the higher the proportion of maternity care in health facilities in that province. Moreover, the higher the unemployment rate for population >15 years in a province, the higher the proportion of maternity care in health facilities in that province. The study concluded that the four independent variables analyzed ecologically were associated with maternity care in health facilities.

Keywords: *maternity care, maternal care, socioeconomic, ecological analysis, public health.*

Introduction

Maternal mortality is a health problem that has become a global issue. Indonesia has not achieved the sustainable development target by 2030 to reduce the

international maternal mortality ratio (MMR) to less than 70/100,000 live births¹. World Bank data states that the MMR ratio in Indonesia has shown a trend that has continued to decline since 2000². The MMR in Indonesia in 2017 was 177 deaths per 100,000 live births; this achievement is still far from the SDGs target². In the ASEAN region, Indonesia is a country with the 3rd highest MMR after Myanmar and Laos. With an average decline of around 3% per year, Indonesia must work harder to achieve the SDGs target by 2030³.

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Indonesia has implemented a strategy to reduce maternal mortality by increasing the availability of midwives. However, the decline in MMR in Indonesia has not been significant. A study of women giving birth in Indonesia recorded 76% using health facilities⁴. However, studies in other countries show that the proportion of women who give birth in health facilities is lower than those who give birth at home. Research in Guinea-Bissau put more than three-fifths of the population, and in Guinea, more than three-quarters of women do not give birth in a health facility. Women of lower socioeconomic status are significantly less likely to use health facility services^{5,6}. Other factors that support childbirth at home include low family income, living in a slum area, and not having a history of delivery in a health facility⁷. This phenomenon provides information that factors related to the value of childbirth at a comfortable home, work, and family income are still the reasons for choosing a birth.

Women who give birth at home and experience childbirth complications are at risk of receiving substandard assistance. Complications can include fetal distress, prolonged labor, and bleeding. They handled complications improperly will increase the risk of maternal death. Several studies on economic factors and access to health services have provided empirical evidence regarding delivery in health facilities^{8,9}. Women with lower income levels have a higher risk of maternal death within six weeks and within one year¹⁰. Another study states a relationship between a partner's job, per capita income, and the choice of place to give birth¹¹.

Access and characteristics of health services in Indonesia accounted for 23% of the difference in maternal mortality ratio between high and low performing provinces. Increasing access to hospitals outside Java is predicted to prevent better maternal mortality¹². Based on the background, the study aims to analyze the impact of socioeconomic factors on healthcare facilities' choice for maternity care in Indonesia.

Materials and Methods

Study Design

The study employed an ecological analysis approach. The ecological analysis focuses on comparisons not individually but between groups. In ecological research, the data analyzed is aggregate data at a specific group or level; in this study, it is at the provincial level. The variables in an ecological analysis can be aggregate measurements, environmental measurements, or global measurements. The purpose of ecological study in epidemiology is to make biological inferences about individual risk effects or ecological inferences about effects on groups^{13,14}.

Data Source

The study uses secondary data from the 2018 Indonesia Basic Health Survey and the 2018 Indonesia Health Profile report. Both reports are official publications from the Ministry of Health of the Republic of Indonesia. The unit of analysis in this study is the province. The study analyzed all areas in Indonesia (34 provinces).

Data Analysis

The dependent variable in this study is the proportion of maternity care in health facilities. Health facilities in this study include hospitals, maternity hospitals, and health centers. The study analyzes four independent variables, which include: percentage of the poor population (as of September 2018), percentage of the population having health insurance, literacy percentage of population >15 years, and the unemployment rate for population >15 years (as of August 2018).

The study analyzed the data in a bivariate manner using a scatter plot. The study used the linear fit line to determine the relationship between the prevalence of hypertension and the independent variable. The research carried out analysis with the help of the IBM SPSS 21 software.

Findings

Table 1 is a descriptive statistic of maternity care in health facilities by the province in Indonesia, and other variables analyzed. The information presented informs that the lowest proportion of maternity

care in health facilities is 30.10%, while the highest proportion of maternity care in health facilities is 98.50%. The range of the ratio of maternity care in health facilities between provinces in Indonesia is quite broad.

Table 1. Descriptive statistics of the proportion of maternity care in health facilities by the province in Indonesia, 2018

Variables	N	Range	Min	Max	Mean	Std. Deviation
The proportion of maternity care in health facilities	34	68.40%	30.10%	98.50%	71.78%	17.08215
Percentage of the poor population (as of September 2018)	34	23.88%	3.55%	27.43%	10.61%	5.70346
Percentage of the the population having health insurance	34	46.71%	46.01%	92.72%	65.99%	11.15727
Literacy percentage of the population >15 years	34	23.08%	76.79%	99.87%	95.99%	4.57075
The unemployment rate for the population >15 years (as of August 2018)	34	7.15%	1.37%	8.52%	4.86%	1.64399

Source: The 2018 Indonesia Basic Health Survey and the 2018 Indonesia Health Profile

Figure 1 shows the scatter plot of maternity care in health facilities and the percentage of the poor population by the province in Indonesia. Figure 1 shows the tendency for a negative relationship

between the two variables. The situation means that the lower the poor population in the region, the higher the proportion of maternity care in health facilities in that region.

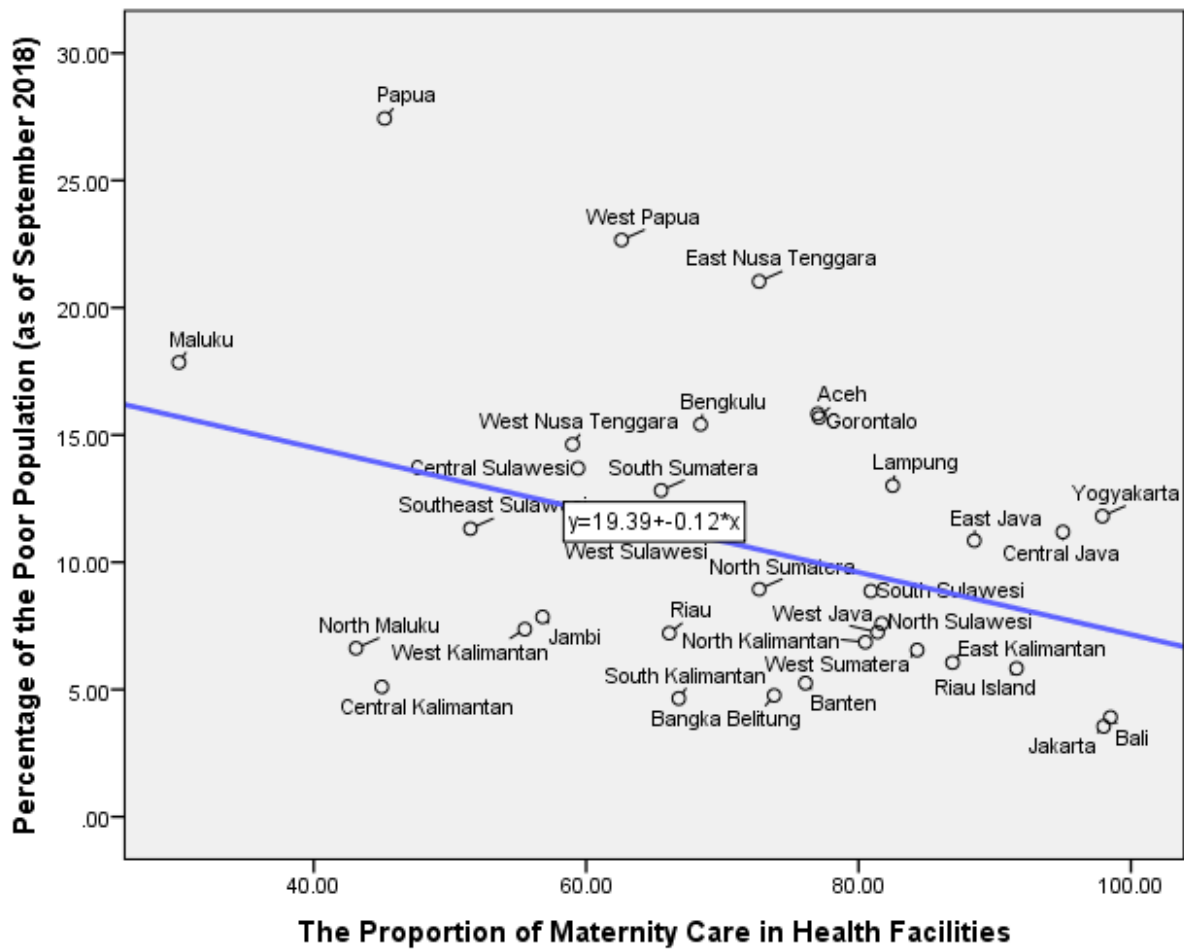


Figure 1. Scatter plot of the proportion of maternity care in health facilities and the percentage of the poor population by the province in Indonesia, 2018

Source: The 2018 Indonesia Basic Health Survey and The 2018 Indonesia Health Profile

Figure 2 is a scatter plot of the proportion of maternity care in health facilities and the percentage of the population having health insurance by the province in Indonesia. Figure 2 shows the tendency for a positive relationship between the two variables.

The condition means that the higher the percentage of the population having health insurance in an area, the higher the proportion of maternity care in health facilities in that area.

Figure 4 is the scatter plot of the proportion of maternity care in health facilities and the unemployment rate for the population >15 years by the province in Indonesia. Figure 4 shows the tendency for a positive relationship between the two

variables. The condition means that the higher the unemployment rate for the population >15 years in a province, the higher the proportion of maternity care in health facilities in that province.

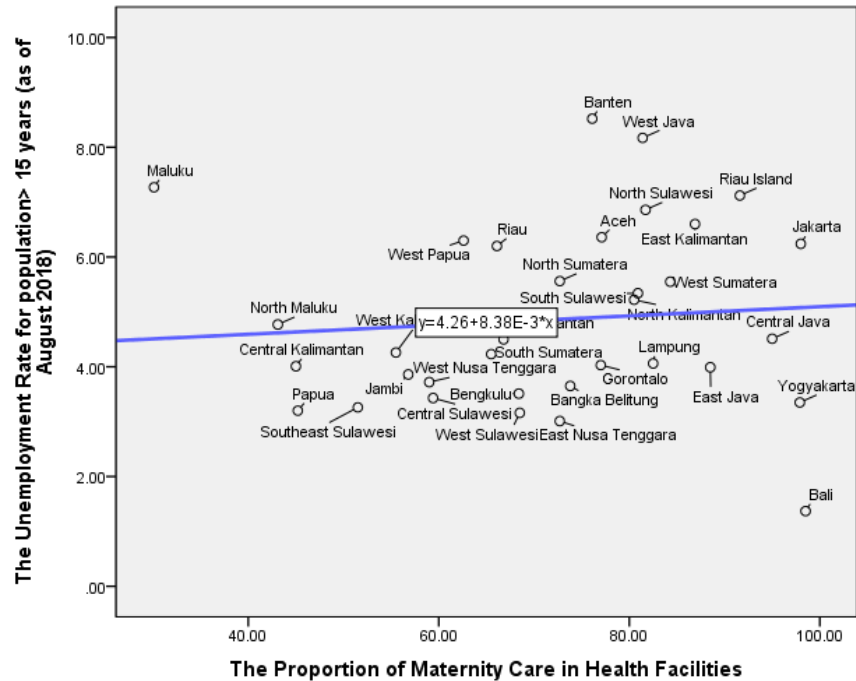


Figure 4. Scatter plot of the proportion of maternity care in health facilities and the unemployment rate for population >15 years by the province in Indonesia, 2018

Source: The 2018 Indonesia Basic Health Survey and The 2018 Indonesia Health Profile

Discussion

The result finding is in line with the conclusions in several previous studies. The better the wealth status, the more likely it is to do maternity care in a health facility¹⁵⁻¹⁸. Moreover, several studies often found poverty a barrier to achieving better performance in the health sector^{19,20}.

The results of this study support the Indonesian government's policy that seeks to remove health financing barriers to access to health services^{21,22}. Meanwhile, studies in several countries also show the same trend^{16,23,24}. In the Indonesian context, the barrier to health financing is the cost of services and travel costs to reach health facilities. This situation

is a consequence of Indonesia's topography as an archipelago with a relatively extreme geographical condition²⁵⁻²⁷.

We can use the literacy condition in a country to measure education success in that country, especially in developing countries. The higher the level of education, the higher the opportunity to do maternity care in a health facility. Several previous studies have also found similar results. The more educated a woman is, the more she will understand the risks of maternity care outside of a health facility^{17,28,29}. In general, better education is a strong determinant to produce higher quality performance in the health sector³⁰⁻³³. Meanwhile, the analysis result slightly contradicts a previous study that found that employment was

not related to the choice of maternity care in health facilities¹⁵.

Conclusion

Based on the results, the study concluded that the four variables analyzed showed an association with maternity care in health facilities. The association between maternity care in health facilities and the percentage of the poor population shows a negative trend. Meanwhile, the association between the proportion of maternity care in health facilities with three other variables (percentage of the poor population, percentage of the population having health insurance, literacy percentage of the population >15 years, and the unemployment rate for population >5 years) shows a positive trend relationship.

Conflict of Interests: Nil

Source of Funding: Self-funding

Ethical Clearance: The study was conducted by utilizing secondary data from published reports. For this reason, the study not required an ethical clearance in the implementation of this research.

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