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Research article

Health Complaints and Health Insurance Ownership as Determinants of Health Service Utilization among Women of Childbearing Age in Indonesia: Aggregate Data Analysis of the 2025 Health Statistics Profile

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ABSTRACT

Background: Women of childbearing age have greater healthcare needs because they require both general and reproductive health services. Nevertheless, healthcare utilization remains suboptimal and may be influenced by health complaints and health insurance ownership. This study aimed to analyze the influence of health complaints and health insurance ownership on healthcare utilization among women of reproductive age in Indonesia.

Methods: This quantitative analytical study employed an ecological (aggregate) design using secondary data from the Indonesia Health Statistics Profile 2025 published by Statistics Indonesia (BPS). The unit of analysis encompasses 38 provinces in Indonesia. The dependent variable was the proportion of women of reproductive age with health complaints who utilized outpatient healthcare services. Independent variables included the proportion of women experiencing health complaints that interfered with daily activities and the proportion of women owning health insurance. The data were analyzed descriptively, followed by scatter plot visualization and multiple linear regression analysis.

Results: The results showed health complaints demonstrated a positive trend with healthcare utilization but were not statistically significant ($p = 0.305$). In contrast, health insurance ownership was significantly associated with healthcare utilization ($p = 0.013$). Provinces with higher health insurance coverage tend to have higher healthcare utilization among women of reproductive age. Health insurance ownership is a significant determinant of healthcare utilization among women of reproductive age in Indonesia, whereas health complaints alone do not significantly influence healthcare utilization.

Conclusion: Expanding health insurance coverage may reduce financial barriers and improve equitable access to healthcare services, particularly for women of reproductive age.

INTRODUCTION

Healthcare is a crucial aspect of public health and well-being. Ensuring public access to healthcare is a crucial step in improving public health (Shobichah & Widya Astuti, 2023). Healthcare utilization is a key indicator of access to healthcare. It provides a snapshot of the extent to which individuals and populations utilize available healthcare facilities. Healthcare utilization is a complex system that reflects health needs, barriers to access, socioeconomic conditions, and cultural factors within a community

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(Cheng et al., 2025). This is crucial, especially for vulnerable groups such as women of childbearing age (Baten et al., 2025).

Women of childbearing age (15–49 years old) are a population group with more complex health care needs than other age groups. In addition to general health services, women of childbearing age also require reproductive health services, maternal health services, family planning services, and early detection of various non-communicable diseases. However, in reality, women often face barriers to accessing health care. Knowledge, accessibility, availability of health services, financing, culture, and family support are some of the factors that influence women's access to health care (Daher et al., 2021; Saxena et al., 2023).

Health insurance coverage and health complaints are also important factors in determining whether someone will utilize healthcare services. The presence of health complaints, especially if they disrupt daily activities, is an indicator of healthcare need that is most closely linked to an individual's decision to seek treatment. Individuals experiencing health complaints tend to have a higher probability of accessing healthcare facilities than those without complaints. The 2025 Indonesian Health Statistics Profile shows that women tend to have a higher morbidity rate, at 13.32% compared to men (12.01%). The percentage of women of childbearing age in Indonesia who experience health complaints that disrupt daily activities reaches 9.31%, with the province with the highest percentage in West Nusa Tenggara (17.15%). However, not all individuals experiencing health complaints utilize healthcare facilities. 30.88% of women of childbearing age who experience health complaints do not go to healthcare facilities because they feel it is unnecessary. Furthermore, the percentage of women of childbearing age who have health complaints and utilize outpatient healthcare services is 34.9%. This figure is significantly lower than the percentage of those who choose to self-medicate (81.01%) (Badan Pusat Statistik, 2025). This indicates that complaints are often ignored or deemed not urgent enough, leading many to choose to self-medicate. Furthermore, the costs of healthcare services also play a role in determining treatment options. Therefore, having health insurance will be a turning point in healthcare utilization.

Health insurance, whether from the government in the form of the National Health Insurance (JKN) or other health insurance, plays a crucial role in ensuring that individuals have coverage for the costs incurred while using health facilities. Having health insurance is expected to reduce financial barriers, thus encouraging people to seek health services when experiencing health problems. This aligns with the target of universal health coverage, which means that everyone can access effective and tailored health services whenever they need them without experiencing financial constraints. However, in reality, in Indonesia, currently there are still 18.46% of women of childbearing age, a vulnerable group, who do not have health insurance, either from the government or private insurance. The presence of people who do not have health insurance indicates that universal health coverage still requires a long process to achieve (Badan Pusat Statistik, 2025; Nazli & Usman, 2025; WHO, 2026c). Therefore, this study aims to analyze the influence of health complaints and insurance ownership on the utilization of health services in Indonesia.

METHODS

This research is a quantitative analysis with an aggregate study approach that uses secondary data from the 2025 Health Statistics Profile published by the Central Statistics Agency (Badan Pusat Statistik, 2025). An aggregate study is an approach that allows researchers to examine the impact of a policy or intervention on health at the population level in a specific area (Tianingrum & Sari, 2026). The data in this study can be accessed through the official website of the Central Statistics Agency. The unit of analysis in this study is all provinces in Indonesia. This research used readily available secondary data and did not involve direct interaction with research subjects or the direct collection of personal data. Therefore, this research did not require ethical clearance, as all data analyzed came from published or documented secondary sources in accordance with applicable regulations.

The dependent variable is the utilization of health services by women of childbearing age experiencing health complaints. The utilization of health services in question is the percentage of women of childbearing age experiencing health complaints and undergoing outpatient treatment at hospitals, clinics, community health centers, or other health facilities. The independent variables in this study are the percentage of women of childbearing age (15-49 years) experiencing health complaints and having

health insurance in each province. The health complaint variable is described as the percentage of women of childbearing age experiencing health complaints that interfere with their daily activities. Health insurance ownership is the percentage of women of childbearing age who have health insurance, either provided by the government (BPJS) or private insurance.
The analysis was conducted using bivariate analysis by entering the research variables into a scatter plot. Statistical analysis was conducted using multiple linear regression to analyze the effect of the independent variables on the dependent variable. This study has limitations, namely, it cannot describe individual factors, given that the unit of analysis in this study is the provinces in Indonesia, based on data from the 2025 Health Statistics Profile.

RESULTS

The distribution of the proportion of health service utilization in Indonesia is shown in Figure 1, where there are still gaps in prevalence rates in various regions.

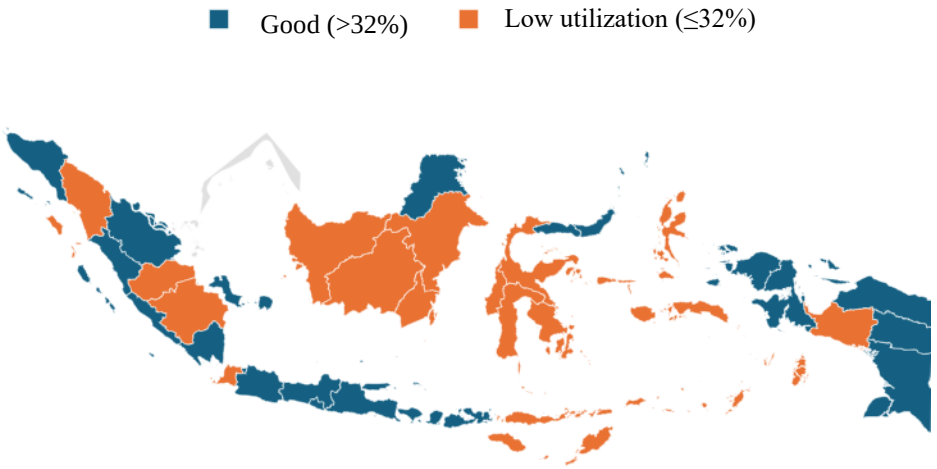

Figure 1. Distribution of the Proportion of Health Service Utilization by Province in Indonesia
Source: BPS RI, 2025

The distribution map shows that areas with a high proportion of health service utilization (>32%) are spread across Java, Bali, Nusa Tenggara, parts of Sumatra, and Papua. Health service utilization remains low in Kalimantan, Sulawesi, and Maluku.

Table 1. Descriptive statistics on dependent and independent variables in the study

Variables	N	Minimum	Maximum	Mean	Standard Deviation
Percentage of utilization of health services in the province	38	18.46	51.07	33.01	7.77
Percentage of respondents who had disturbing complaints	38	66.63	99.50	8.05	8.15
Percentage of respondents who have health insurance	38	2.81	17.15	84.67	2.69

Percentage Description of Respondents' Complaints Regarding the Use of Health Services

The following is a description of the use of health services in relation to respondents' complaints.

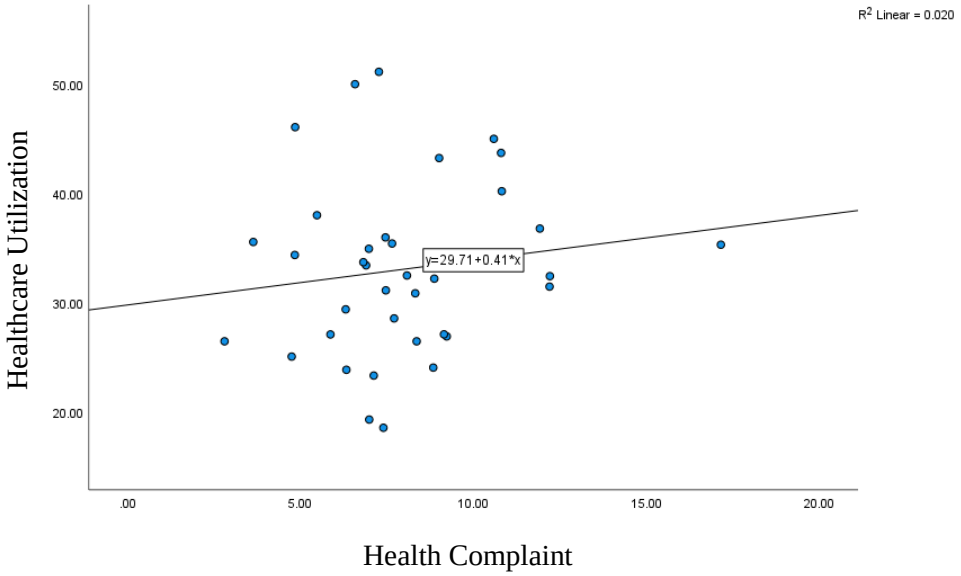

Figure 2. *Scatter* plot of health service utilization and respondents' complaints
Source: BPS RI, 2025

The figure above shows a distribution plot of the proportion of healthcare service utilization and the respondent complaint variable. The line in the diagram indicates that the higher the proportion of respondents with complaints, the higher the proportion of healthcare service utilization in that province. The results of the influence test showed that the health complaint variable did not have a significant effect on the use of health services (p= 0.305>0.05).

Health Insurance Ownership

The following are the results of the distribution plot between the percentage of health service utilization and the variable of health insurance ownership.

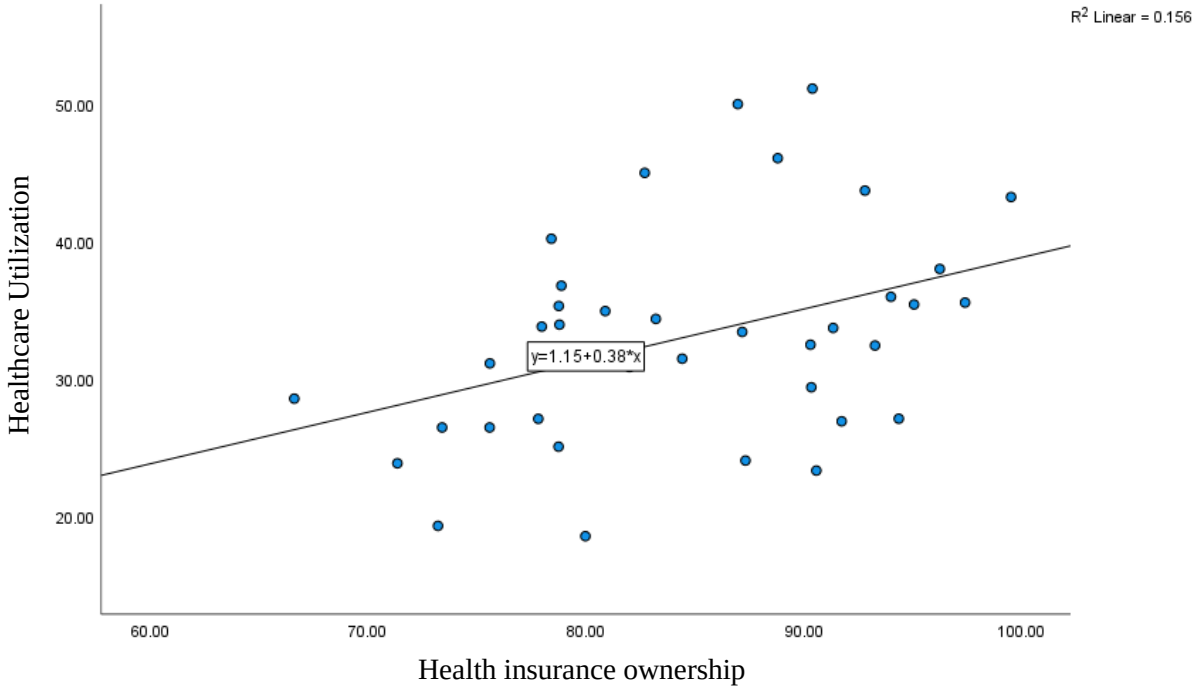

Figure 3. *Scatter* plot of the health service utilization and the variable of health insurance ownership
Source: BPS RI, 2025

The figure above shows a distribution plot of the percentage of healthcare utilization and health insurance ownership. The line in the diagram indicates that the higher the proportion of healthcare ownership, the higher the proportion of healthcare utilization in that province.
The results of the influence test show that the variable of health insurance ownership has a significant influence on the use of health services ($p= 0.013<0.05$).

DISCUSSION

The study results show that the presence of health complaints does not significantly influence the utilization of health services. Many people ignore health complaints because they assume the pain they feel is not severe enough or is just a common ailment, even though it can interfere with daily activities. Therefore, some tend to ignore these complaints. Many even assume that the health problems they experience will improve over time. This makes people feel there is no need to visit health services even though they have health complaints. Furthermore, people also tend to choose to self-medicate for some symptoms of illnesses that are not considered too severe (Aljinović-Vučić, 2025; Taber et al., 2015).
These problems often occur in vulnerable groups, such as women of childbearing age. Across various cultural backgrounds, women frequently experience gender inequality, leading them to ignore their health concerns. Women also tend to prioritize other things they deem more important than their health concerns. This leads women to avoid utilizing health services even when their health concerns disrupt their daily activities (Su et al., 2025; Terefe et al., 2025).
Other factors influencing healthcare utilization are medical costs and health insurance coverage (Taber et al., 2015). This is consistent with research findings showing that health insurance coverage significantly impacts healthcare utilization. The scatterplot also shows that the higher the percentage of healthcare coverage in a province, the higher the percentage of healthcare utilization among women of childbearing age in that province.
Having health insurance allows someone to access healthcare services without financial barriers to treatment. This is a crucial factor for vulnerable groups such as women of childbearing age. Knowledge, sociocultural factors, and family support play a significant role in determining whether women can access healthcare, especially in low- and middle-income countries (Saxena et al., 2023; Su et al., 2025). Having health insurance can reduce financial barriers, which are often the main reason for delays or even failure to utilize health services. With financial protection, women have a greater opportunity to obtain timely promotive, preventive, curative, and rehabilitative health services. Socially and economically, many women in Indonesia remain financially dependent, especially housewives. This situation often influences the decision to seek health services based on the family's economic capacity and household spending priorities. Health complaints experienced by women are often considered tolerable, leading to postponement of examinations or treatment. Having health insurance plays a role in reducing these barriers because the cost of services is largely covered by the health insurance system. Thus, women need not worry that utilizing health services will become an economic burden for their families, allowing them to make the decision to seek medical help more quickly (Laar et al., 2026; Nwokolo et al., 2025; Salyanty & Sinurat, 2025; Shyanti et al., 2025; Su et al., 2025; Terefe et al., 2025).
These findings also indicate that health insurance serves not only as a financial protection mechanism but also as an instrument to improve access and equity in health services (Feyisa, 2022; WHO, 2026a). Women of childbearing age are a group with more complex health care needs than other population groups. In addition to general health services, they require reproductive health services, family planning services, prenatal care, childbirth, postpartum care, reproductive cancer screening, and treatment for various health problems related to reproductive function. Therefore, having health insurance is a very important factor in ensuring continuity of health services throughout a woman's reproductive life cycle (Feyisa, 2022; Morgan et al., 2026; WHO, 2026b, 2026c).
Beyond the financial aspect, having health insurance also increases women's autonomy in making decisions about their health. Every woman has the right to determine the health services she needs without economic constraints or dependence on the decisions of other family members. Access to health insurance provides women with a sense of security in utilizing health facilities according to their clinical needs. This aligns with the principle of Universal Health Coverage (UHC), which emphasizes that every individual has the right to access quality health services without experiencing financial hardship (Salyanty & Sinurat, 2025; WHO, 2026c).

Having health insurance increases the utilization of health services. Individuals with health coverage tend to have more frequent checkups, receive necessary treatment, and utilize health services earlier than those without financial coverage. Reduced out-of-pocket expenditure is one of the main mechanisms that improves public access to health services, especially for vulnerable groups such as women of childbearing age (Erlangga et al., 2019; Fadya & Ahsan, 2025; Shami et al., 2019).

CONCLUSION

The data analysis showed that the percentage of health complaints did not significantly impact healthcare utilization among women of childbearing age in Indonesia. Meanwhile, the percentage of health insurance coverage at the provincial level significantly impacted healthcare utilization among women of childbearing age in Indonesia. The study also showed that the higher the percentage of health insurance coverage in a province, the higher the healthcare utilization in that province.

CONFLICTS OF INTEREST

We declare there is no conflict of interest.

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