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

by Stefanus Supriyanto Et Al

Submission date: 15-Apr-2022 12:56PM (UTC+0800)
Submission ID: 1811216273
File name: Maternity_Care_in_Indonesia_Do_socioeconomic_factors_affects.pdf (467.3K)
Word count: 3246
Character count: 17622

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

Stefanus Supriyanto[1], Ratna Dwi Wulandari[1], Nikmatur Rohmah[2], Agung Dwi Laksono[3]

[1]Lecturer, Faculty of Public Health, Universitas Airlangga, Surabaya, Indonesia. Universitas Airlangga Campus C Mulyorejo, Surabaya, Indonesia 60115, [2]Lecturer, Faculty of Health Science, Muhammadiyah University of Jember, East Java, Indonesia. Gumuk Kerang, Karangrejo, Sumbersari, Jember, East Java, Indonesia 68124, [3]Researcher, National Institute of Health Research and Development, the Indonesia Ministry of Health, Jakarta, Indonesia. Percetakan Negara 29, Jakarta, Indonesia 10560

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 births[1]. World Bank data states that the MMR ratio in Indonesia has shown a trend that has continued to decline since 2000[2]. The MMR in Indonesia in 2017 was 177 deaths per 100,000 live births; this achievement is still far from the SDGs target[2]. 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 2030[3].

Corresponding Author:
Ratna Dwi Wulandari
Faculty of Public Health, Universitas Airlangga, Surabaya, Indonesia. Universitas Airlangga Campus C Mulyorejo, Surabaya, Indonesia 60115
Email: ratna-d-w@fkm.unair.ac.id

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 facilities[4]. 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 facility[7]. 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 unproperly 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 year[10]. Another study states a relationship between a partner's job, per capita income, and the choice of place to give birth[11].

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 mortality[12]. 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.

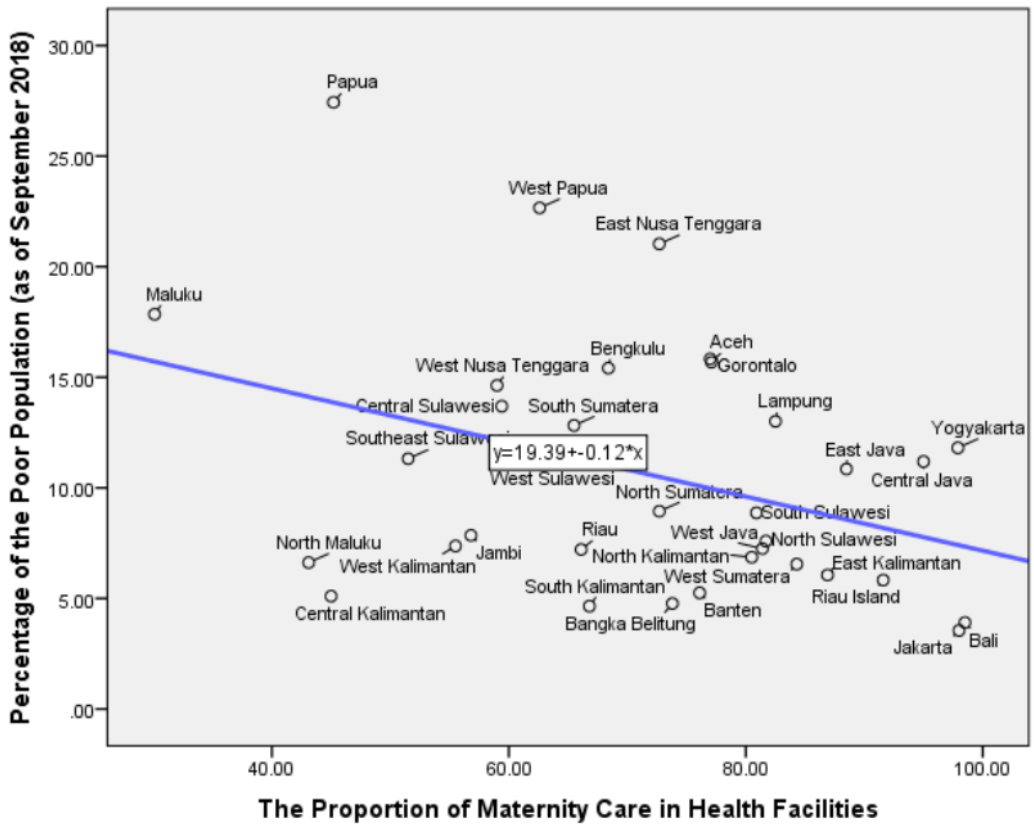

Figure 1. Scatter plot of the proportion of maternity care in health facilities and the percentage of the poor population by the province in Indonesia, 2018

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.

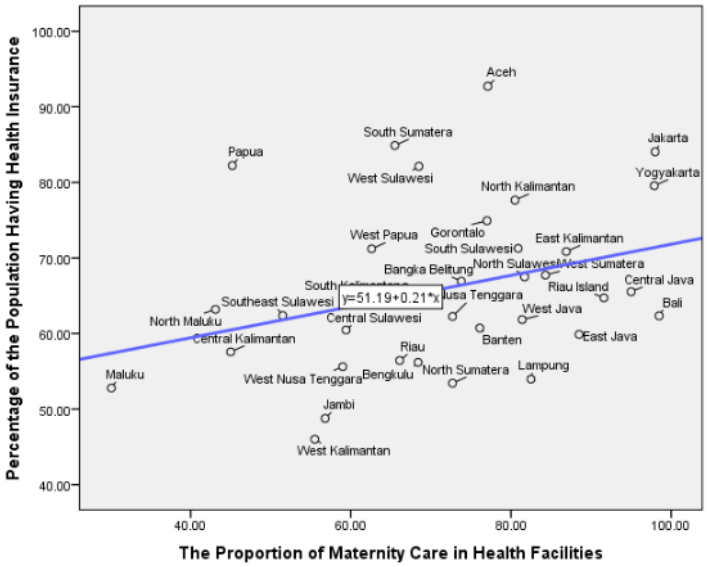

Figure 2. Scatter plot of the proportion of maternity care in health facilities and the percentage of the population having health insurance by the province in Indonesia, 2018

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

Figure 3 is the scatter plot of maternity care in health facilities and the literacy percentage of the population >15 year by the province in Indonesia. Figure 3 shows the tendency for a positive relationship between the two variables. The situation means that the higher the literacy percentage of the population >15 year in a province, the higher the proportion of maternity care in health facilities in that province.

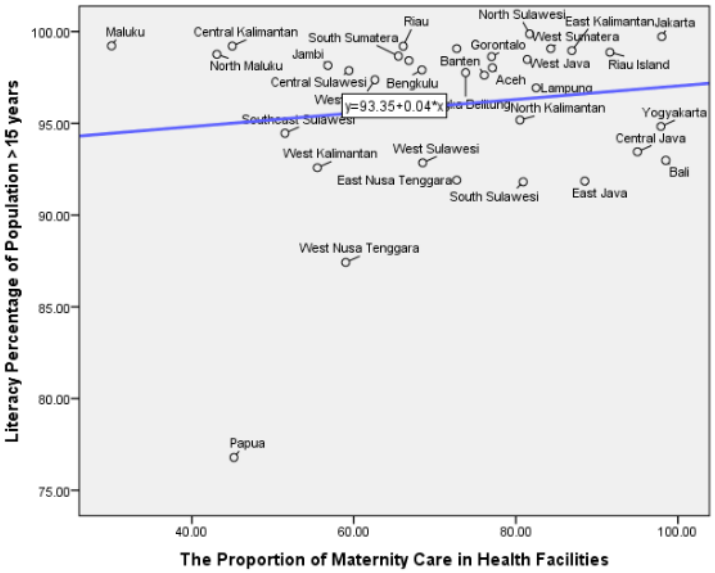

Figure 3. Scatter plot of the proportion of maternity care in health facilities and the literacy percentage of population >15 years by the province in Indonesia, 2018

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

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.

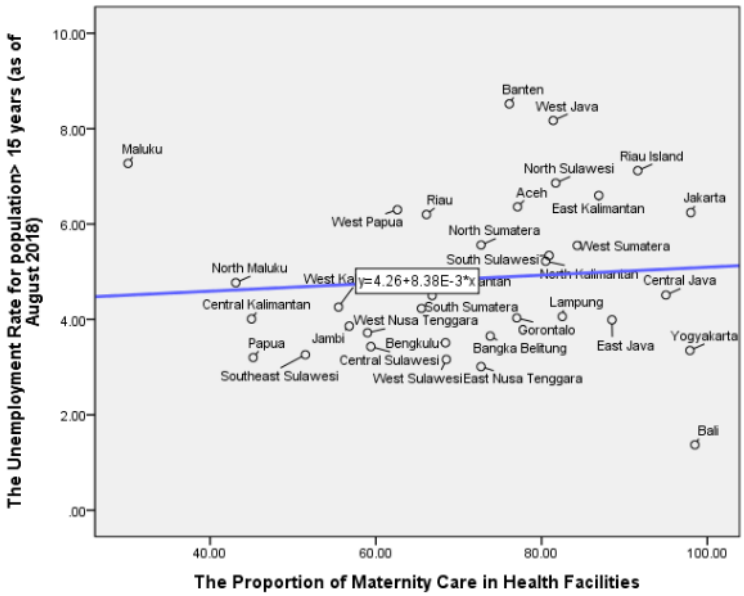

Figure 4. Scatter plot of the proportion of maternity care in health facilities and the unemployment rate for population >15 years by the province in Indonesia, 2018

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 facility[15–18]. 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 condition[25–27].

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 sector[30–33]. Meanwhile, the analysis result slightly contradicts a previous study that found that employment was

not related to the choice of maternity care in health facilities[15].

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.

Acknowledgments: The authors are grateful to the Ministry of Health of the Republic of Indonesia for providing a report as material for analysis in this study.

References

1. Lisa Cameron, Diana Contreras Suarez KC. Understanding the determinants of maternal mortality : An observational study using the Indonesian Population Census. PLoS One. 2019;1–18.
2. WHO. Maternal mortality ratio (modeled estimate, per 100,000 live births) - Indonesia. The World Bank,. 2019. p. 1.
3. WHO. Maternal mortality [Internet]. World Health Organization. 2019. Available from: https://www.who.int/news-room/fact-sheets/detail/maternal-mortality
4. Azhar K, Dharmayanti I, Tjandrarini DH, Hidayangsih PS. The influence of pregnancy classes on the use of maternal health services in Indonesia. BMC Public Health. 2020;20(1):1–9.
5. Yaya S, Bishwajit G, Gunawardena N. Socioeconomic factors associated with choice of delivery place among mothers: A population-based cross-sectional study in Guinea-Bissau. BMJ Glob Heal. 2019;4(2):1–7.
6. Ahinkorah BO. Non-utilization of health facility delivery and its correlates among childbearing women: a cross-sectional analysis of the 2018 Guinea demographic and health survey data. BMC Health Serv Res. 2020;20(1):1–10.
7. Jeyashree K, Kathirvel S, Trusty K, Singh A. Socio-demographic factors affecting the choice of place of childbirth among migrant and native women – A case control study from Chandigarh, India. Sex Reprod Healthc. 2018;17(Oktober):81–5.
8. Kurniati A, Chen CM, Efendi F, Berliana SM. Factors influencing Indonesian women's use of maternal health care services. Health Care Women Int. 2018;39(1):3–18.
9. Bekuma TT, Firrisa B, Negero MG, Kejela G, Bikila H. Factors Affecting Choice of Childbirth Place among Childbearing Age Women in Western Ethiopia: A Community-Based Cross-Sectional Study. Int J Reprod Med. 2020;2020:1–9.
10. Jeong W, Jang SI, Park EC, Nam JY. The effect of socioeconomic status on all-cause maternal mortality: A nationwide population-based cohort study. Int J Environ Res Public Health. 2020;17(12):1–13.
11. Dhakal P, Shrestha M, Baral D, Pathak S. Factors Affecting the Place of Delivery among Mothers Residing in Jhorahat VDC, Morang, Nepal. Int J community based Nurs midwifery. 2018;6(1):2–11.
12. Croke K, Telaye Mengistu A, O'Connell

SD, Tafere K. The impact of a health facility construction campaign on health service utilisation and outcomes: analysis of spatially linked survey and facility location data in Ethiopia. BMJ Glob Heal. 2020;5(8):e002430.

13. Utami SM, Handayani F, Hidayah M, Wulandari RD, Laksono AD. Ecological Analysis of Preeclampsia/Eclampsia Case in Sidoarjo Regency, Indonesia, 2015-2019. Indian J Forensic Med Toxicol. 2020;14(4):3474–9.
14. Laksono AD, Kusrini I. Ecological Analysis of Stunted Toddler in Indonesia. Indian J Forensic Med Toxicol. 2020;14(3):1685–91.
15. Laksono AD, Wulandari RD. The Barrier to Maternity Care in Rural Indonesia. J Public Heal From Theory to Pract. 2020;Online First.
16. Wulandari RD, Laksono AD, Matahari R. The Effects of Health Insurance on Maternity Care in Health Services in Indonesia. Int J Innov Creat Chang. 2020;14(2):478–97.
17. Adde KS, Dickson KS, Amu H. Prevalence and determinants of the place of delivery among reproductive age women in sub–Saharan Africa. PLoS One. 2020;15(12 December):1–14.
18. Efendi F, Ni'Mah AR, Hadisuyatmana S, Kuswanto H, Lindayani L, Berliana SM. Determinants of facility-based childbirth in Indonesia. Sci World J. 2019;2019.
19. Rohmah N, Yusuf AA, Hargono R, Laksono ADADAD, Masruroh, Ibrahim I, et al. Determinants of teenage pregnancy in Indonesia. Indian J Forensic Med Toxicol. 2020;14(3):2080–5.
20. Andayani Q, Koesbardiati T, Prahastuti AD, Masruroh M, Laksono AD. The Barrier to Access Health Insurance for Maternity Care: Case Study of Female Workers in Indonesia. Medico-Legal Updat. 2021;21(2):926–32.
21. Nasution SK, Mahendradhata Y, Trisnantoro L. Can a National Health Insurance Policy Increase Equity in the Utilization of Skilled Birth Attendants in Indonesia? A Secondary Analysis of the 2012 to 2016 National Socio-Economic Survey of Indonesia. Asia-Pacific J Public Heal. 2020;32(1):19–26.
22. Anindya K, Lee JT, McPake B, Wilopo SA, Millett C, Carvalho N. Impact of Indonesia's national health insurance scheme on inequality in access to maternal health services: A propensity score matched analysis. J Glob Health. 2020;10(1):1–12.
23. Yaya S, Da F, Wang R, Tang S, Ghose B. Maternal healthcare insurance ownership and service utilisation in Ghana: Analysis of Ghana demographic and health survey. PLoS One. 2019;14(4):1–13.
24. Wang W, Temsah G, Mallick L. The impact of health insurance on maternal health care utilization: Evidence from Ghana, Indonesia and Rwanda. Health Policy Plan. 2017;32(3):366–75.
25. Nainggolan O, Hapsari D, Indrawati L. Pengaruh Akses ke Fasilitas Kesehatan terhadap Kelengkapan Imunisasi Baduta (Analisis Riskesdas 2013). Media Penelit dan Pengemb Kesehat. 2016;26(1):15–28.
26. Laksono AD, Mubasyiroh R, Laksmiarti T, Nurhotimah E, Suharmiati, Sukoco NEW. Healthcare Accessibility in Indonesia (Aksesibilitas Pelayanan Kesehatan di Indonesia). Supriyanto S, Chalidyanto D, Wulandari RD, editors. PT Kanisius; 2016.
27. Suharmiati, Laksono AD, Astuti WD. Policy Review on Health Services in Primary Health Center in the Border and Remote Area (Review Kebijakan tentang Pelayanan Kesehatan Puskesmas di Daerah Terpencil Perbatasan). Bull Heal Syst Res. 2013;16(2):109–16.
28. Geleto A, Chojenta C, Musa A, Loxton D. WOMEN's Knowledge of Obstetric Danger signs in Ethiopia (WOMEN's KODE):a systematic review and meta-analysis. Syst Rev.

2019;8(1):1–14.

29. Wulandari RD, Laksono AD. Determinants of knowledge of pregnancy danger signs in Indonesia. PLoS One. 2020;15(5):Article number e0232550.
30. Megatsari H, Laksono AD, Ibad M, Herwanto YT, Sarweni KP, Geno RAP, et al. The community psychosocial burden during the COVID-19 pandemic in Indonesia. Heliyon. 2020;6(10):Article number e05136.
31. Ipa M, Widawati M, Laksono AD, Kusrini I, Dhewantara PW. Variation of preventive practices and its association with malaria infection in eastern Indonesia: Findings from community-based survey. PLoS One. 2020;15(5):e0232909.
32. Seran AA, Antaria MD, Haksama S, Setijaningrum E, Laksono AD, Prahastuti Sujoso AD. Disparities of the use of hormonal and non-hormonal contraceptive drugs in urban and rural areas in Indonesia and the world. Syst Rev Pharm. 2020;11(9):66–73.
33. Laksono AD, Ibad M, Mursita A, Kusrini I, Wulandari RD. Characteristics of mother as predictors of stunting in toddler. Pakistan J Nutr. 2019;18(12):1101–6.

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

ORIGINALITY REPORT

18%	11%	11%	7%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Florida Institute of Technology Student Paper	2%
2	Submitted to Udayana University Student Paper	2%
3	www.ijicc.net Internet Source	1%
4	www.geo.wvu.edu Internet Source	1%
5	bmchealthservres.biomedcentral.com Internet Source	1%
6	www.researchgate.net Internet Source	1%
7	Submitted to Tufts University Student Paper	1%
8	Submitted to All India Institute of Medical Sciences, Rishikesh Student Paper	1%

9	Agung Dwi Laksono, Ratna Dwi Wulandari, Ratu Matahari. "Does a Husband's Education Matter in Antenatal Care Visits Involvement?: Study on the Poor in Indonesia", Research Square, 2020 Publication	1 %
10	Anteneh Asefa, Aline Semaan, Therese Delvaux, Elise Huysmans et al. "The impact of COVID-19 on the provision of respectful maternity care: findings from a global survey of health workers", Cold Spring Harbor Laboratory, 2021 Publication	1 %
11	Submitted to Griffth University Student Paper	1 %
12	Yoshito Kawakatsu, Tomohiko Sugishita, Kennedy Oruenjo, Steve Wakhule, Kennedy Kibosia, Eric Were, Sumihisa Honda. "Determinants of health facility utilization for childbirth in rural western Kenya: cross-sectional study", BMC Pregnancy and Childbirth, 2014 Publication	1 %
13	Mamunur Rashid, Anne-Sofie Hiswåls, Mohammad Rocky Khan Chowdhury, Gloria Macassa. "Determinants of Utilization of Institutional Delivery Services in Zambia: An	1 %

Analytical Cross-sectional Study", Research Square, 2021
Publication

14	oamjms.eu Internet Source	1 %
15	Agung Dwi Laksono, Ratna Dwi Wulandari. "Factors Influencing Unintended Pregnancies among Childbearing Age Women in Indonesia", Research Square, 2020 Publication	<1 %
16	Submitted to Far Eastern University Student Paper	<1 %
17	Ghebrehiwe, M, M Sharan, K Rogo, O Gebreamlak, B Haile, M Gaim, Z Andemariam, and S Gebreselasie. "Quality of Maternity Care at Health Facilities in Eritrea in 2008", Journal of the Eritrean Medical Association, 2010. Publication	<1 %
18	Hanifa M. Denny, Agung D. Laksono, Ratu Matahari, Bina Kurniawan. "The Determinants of Four or More Antenatal Care Visits Among Working Women in Indonesia", Asia Pacific Journal of Public Health, 2021 Publication	<1 %
19	Trisari Anggondowati, Poppy E. Deviany, Kamaluddin Latief, Annis C. Adi et al. "Care-	<1 %

seeking and health insurance among pregnancy-related deaths: A population-based study in Jember District, East Java Province, Indonesia", PLOS ONE, 2022
Publication

20	e-mfp.org Internet Source	<1 %
21	ejmcm.com Internet Source	<1 %
22	minerva-access.unimelb.edu.au Internet Source	<1 %
23	mobt3ath.com Internet Source	<1 %
24	www.degruyter.com Internet Source	<1 %
25	Rian Diana, Ali Khomsan, Faisal Anwar, Dyan Fajar Christianti, Rendra Kusuma, Riris Diana Rachmayanti. "Dietary Quantity and Diversity among Anemic Pregnant Women in Madura Island, Indonesia", Journal of Nutrition and Metabolism, 2019 Publication	<1 %

Exclude quotes	On	Exclude matches	Off
Exclude bibliography	On		