

Research Article

Sociodemographic Factors of Elective and Emergency Cesarean Delivery in the Referral Hospital: A cross-sectional study

Faktor Sosiodemografi pada persalinan seksio sesarea elektif dan emergensi di Rumah Sakit Rujukan: sebuah penelitian potong lintang

Restuaji B. K. Umam¹, Nur I. Purnamasari², I Putu Sudayasa³, Juminten Saimin²

¹Medical Program Faculty of Medicine
²Department of Obstetrics and Gynecology
³Department of Public Health
Faculty of Medicine Universitas Halu Oleo
Kendari

Abstract

Objectives: To analyze the correlation between sociodemographic factors and cesarean section delivery at Referral Hospital in Kendari.

Method: This was a cross-sectional study conducted at dr. Ismoyo Hospital in Kendari. Data were obtained from medical records of cesarean section delivery from January to December 2019. Sampling used simple random sampling techniques. Data were analyzed using the Chi-square test.

Results: There were 50.5% emergency cesarean and 49.5% elective cesarean. The maternal age was 18-44 years. Most cases are aged 20-35 years (78.5%), have a higher education level (65.1%), employees (53.2%), and multipara (56.5%). There was a correlation between age and cesarean section ($p = 0.027$). There was no correlation between education level ($p = 0.618$), occupation ($p = 0.563$), and parity ($p = 0.365$) with cesarean section.

Conclusion: There is a correlation between maternal age and cesarean section. Education, counseling, and antenatal care should be done for early detection.

Keywords: age, cesarean section, education level, occupation, parity.

Abstrak

Tujuan: Menilai hubungan antara faktor sosiodemografi dan waktu tindakan seksio sesarea.

Metode: Penelitian ini menggunakan desain potong lintang, dilakukan di RS dr. Ismoyo Kendari. Data diperoleh dari rekam medik kasus persalinan seksio sesarea pada bulan Januari sampai Desember 2019. Sampel dipilih menggunakan teknik simple random sampling. Analisis data menggunakan uji Chi-square, dengan nilai kemaknaan $p \leq 0,05$.

Hasil: Terdapat 50,5% seksio sesarea emergensi dan 49,5% seksio sesarea elektif. Rentang usia ibu adalah 18-44 tahun. Kasus terbanyak berusia 20-35 tahun (78,5%), memiliki tingkat pendidikan tinggi (65,1%), pegawai (53,2%), dan multipara (56,5%). Terdapat hubungan yang bermakna antara usia ibu dan waktu tindakan seksio sesarea ($p=0,027$). Tingkat pendidikan ($p=0,618$), pekerjaan ($p=0,563$), dan paritas ($p=0,365$) menunjukkan tidak memiliki hubungan yang bermakna dengan tindakan seksio sesarea.

Kesimpulan: Faktor sosiodemografi yang berhubungan dengan tindakan seksio sesarea adalah usia ibu. Edukasi, konseling, dan pemeriksaan antenatal harus dilakukan untuk deteksi dini.

Kata kunci: paritas, pekerjaan, seksio sesarea, tingkat pendidikan, usia.

Correspondence author. Juminten Saimin. Department of Obstetrics
Faculty of Medicine Universitas Halu Oleo. Kendari
Email; inten_azis@yahoo.com

Received: August, 2021 Accepted: September, 2022 Published: October, 2022

INTRODUCTION

The maternal mortality rate is the indicator of maternal health services.¹ Cesarean section reduces complications of pregnancy and childbirth to decrease the maternal mortality rate. Many factors influence cesarean section deliveries. Indications of the mother and fetus affecting cesarean section will be performed in an emergency or planned.^{2,3}

According to the World Health Organization (WHO), the cesarean section rate in a country is 10-15%.⁴ The overall cesarean section rate in the world is around 18.6%, in some countries is above 27.2%.⁵ The cesarean section rate in Asia also increases, 34.9% in China⁶ and 23.2% in Malaysia.⁷ Indonesia has increased, 12% in 2012 and 17% in 2017.⁸ The cesarean section rate in Southeast Sulawesi also increased, from 3.3% to 7.7% in 2018.⁹

The National Health Insurance System, organized by Social Security Management Agency for Health (SCMAH), has been implemented in Indonesia since January 1, 2014. The National Health Insurance requires the implementation of a tiered health service and referral system. Participants receive health services at first-level health facilities, including Puskesmas, doctor practices, dental practices, general clinics, and hospitals class D. Participants are not allowed directly to go to the hospitals or advanced health facilities except in emergency conditions.¹⁰ The tiered referral system has an impact on service quality and public health.¹¹ The number of cesarean sections in Referral Hospitals was 37.7%. The distribution of cases based on sociodemographic factors and treatment varied.¹²

The cesarean section at the referral hospital is high. Therefore, this study aims to analyze the correlation between sociodemographic factors and the time of cesarean section at a referral hospital in Kendari.

METHODS

This study used a cross-sectional design. Data obtained from medical records of cesarean section delivery at dr. Ismoyo Hospital from January to December 2019. Sample selection used a simple random sampling technique. The number of samples was 186 cases determined by the Slovin formula.

The time of cesarean delivery was a dependent variable. Age, education level, occupation, and parity were independent variables. Data analysis used the Chi-square test, with a significance value of $p \leq 0.05$.

RESULTS

Based on the time of cesarean section, there were 94 cases of emergency cesarean (50.5%) and 92 cases of elective cesarean (49.5%). In this study, the maternal age range was 18-44 years.

Table 1. Characteristics of the Subject

Characteristics	n	%
Age (year old)		
20-35	146	78.5
<20 and >35	40	21.5
Education level		
Low	14	7.5
Middle	51	27.4
High	121	65.1
Occupation		
Non-employees	87	46.8
Employees	99	53.2
Parity		
Primipara	81	43.5
Multipara	105	56.5

Table 1 shows that most cases of cesarean delivery are aged 20-35 years (78.5%) and have a higher education level (65.1%). The employees (53.2%) are almost equal to non-employees (46.8%). Multipara (56.5%) are higher than primipara (43.5%).

Table 2. The Correlation between Sociodemographic Factors and the Time of Cesarean Section

Variable	Cesarean section						P-value
	Emergency		Elective		Total		
	n	%	n	%	n	%	
Age (years old)							0.027
20-35	80	43.0	66	35.5	146	78.5	
<20 and >35	14	7.5	26	14.0	40	21.5	
Education level							0.618
Primary	8	4.3	6	3.2	14	7.5	
Secondary	23	12.4	28	15.1	51	27.4	
Higher	63	33.9	58	31.2	121	65.1	
Occupation							0.563
Non-employees	42	22.6	45	24.2	87	46.8	
Employees	52	28.0	47	25.3	99	53.2	
Parity							0.365
Primipara	44	23.7	37	19.9	81	43.5	
Multipara	50	26.9	55	29.6	105	56.5	

Table 2 shows that emergency cesarean is more often at 20-35 years (43.0%). Elective cesarean is more often at <20 and >35 years (14.0%). There is a correlation between maternal age and time of cesarean section ($p=0.027$).

Based on education level, an emergency cesarean is more often at higher education level (33.9%). Elective cesarean is more often in middle education (15.1%). However, there was no correlation between education level and time of cesarean section ($p=0.618$).

Employees had a more frequent emergency cesarean (28.0%), while non-employees had a more often elective cesarean (24.2%). There was no correlation between occupation and time of cesarean delivery ($p=0.563$).

Primiparas had a more frequent emergency cesarean (23.7%), and multiparas were more frequent elective cesarean (29.6%). However, there was no correlation between parity and time of cesarean delivery ($p=0.365$).

DISCUSSION

The age range for the cesarean section in this study was 18-42 years. Most cesarean deliveries are carried out at 20-35 years, and there is a correlation between maternal age and the time of cesarean section. This result is in line with several previous studies in several regions in Indonesia.¹²⁻¹⁵

Reproductive age affects the readiness of pregnant women to undergo pregnancy and childbirth. 20-35 years is a healthy reproductive age. At this age, pregnant women can be in a healthy condition both physically and psychologically. Several factors affect readiness for pregnancy and childbirth.^{2,16}

Higher education level was the largest group undergoing cesarean section in this study. These results are different from previous studies conducted on health insurance users and in private hospitals.^{13,15} Advances in technology make it easier for people to obtain information and access health services. Pregnant women with higher education levels are expected to increase their knowledge and awareness in anticipating complications during pregnancy or childbirth.¹⁴ Caesarean section is performed based on several considerations, both maternal and fetal complications.^{2,17}

In this study, employees underwent cesarean section more often, but there was no relationship between cesarean section and occupation. These results are not in line with other studies conducted in big cities. The reason behind the trend of cesarean delivery in big cities is work. Status as a worker encourages women to choose cesarean section because they can plan time to work after giving birth.¹⁴ The types of occupation in small towns are not varied, and the working time is more flexible so that pregnant women are more flexible in planning the delivery process.

In this study, multipara was the largest with cesarean section, although it was not statistically significant. Most women who experience cesarean section are multipara.¹⁴ Another hand, a different study showed a relationship between parity and cesarean section.¹⁸

Mothers with higher parity have experience with childbirth. It makes pregnant women more concerned about their pregnancy and influences decision-making in determining childbirth.¹² Cesarean section is not a personal preference, but several obstacles both mother and fetus.^{2,17}

CONCLUSIONS

Based on the results study, we concluded that there is a correlation between maternal age and the time of cesarean section. There is no correlation between education level, occupation, and parity with the time of cesarean section. Further research about the indication of cesarean section is needed to determine the intervention. Education, counseling, and antenatal care should be done for early detection.

REFERENCES

1. Kemenkes RI. Profil Kesehatan Indonesia tahun 2019. Jakarta: Sekretariat Jendral Kementerian Kesehatan RI. 2020.
2. Saifuddin, A.B., Rachimhadhi, T., Wiknjosastro H. Ilmu Kebidanan. Ed 4. Cet Keempat. Jakarta: Bina Pustaka Sarwono Prawirohardjo. 2014: 1-20.
3. Cunningham, F.G., Leveno, K.J., Bloom, S.L, et al. Obstetric Williams. 24th ed. Washington DC: McGraw-Hill Companies.2014
4. World Health Organization. WHO statement on cesarean section rates. Department of Reproductive Health and Research. World Health Organization. 2015: 1-8.
5. Betrán, A.P., Ye, J., Moller, A.B., Zhang, J., et al. The increasing trend in cesarean section rates: global, regional and national estimates: 1990-2014. PLoS One.2016;11(2): e0148343.
6. Hong T.L., Shunseng L., Trasande L., et al. Geographic variation and temporal trends in cesarean delivery rates in China 2008-2014. JAMA. 2017; 317(1): 69-76.
7. Karalasingam, S.D., Jeganatham, R., Jegasothy, R., Reidpath, D.D. Cesarean section rates from Malaysian tertiary hospitals using Robson's 10-group classification. BMC Preg Childbirth.2020; 20:64. <https://doi.org/10.1186/s12884-020-2760-2>.
8. BKKBN. Survei Demografi dan Kesehatan Indonesia Jakarta: Badan Kependudukan dan Keluarga Berencana Nasional. 2018
9. Kemenkes RI. Profil Kesehatan Indonesia Tahun 2018. Jakarta: Kementerian Kesehatan Republik Indonesia. 2019.
10. Kemenkes RI. Buku pegangan sosialisasi Jaminan Kesehatan Nasional (JKN) dalam Sistem Jaminan Sosial Nasional. Jakarta: Kementrian Kesehatan Republik Indonesia. 2014.
11. Yusuf S, Achmar N, Haniarti, et al. Revenue and financing of patients with national health insurance by the social security organizing agency to improve health services. Enferm Clin. 2020; Suppl 6:276–9
12. Saimin, J., Lianawati., Yohanis, M., Ridwan, S. Sociodemografi Persalinan dengan Seksio Sesarea di RS dr. Ismoyo Kendari. Jur Medula. 2020; 7(2): 68-73.
13. Andayasari, L., Muljati, S., Sihombing, M., et al. Proporsi seksio sesarea dan faktor yang berhubungan dengan seksio sesarea di Jakarta. Bul Penelitian Kes. 2015;43(2): 105-16.
14. Sihombing N., Saptarini I., Putri D.S.K. Determinan Persalinan Sectio Caesarea di Indonesia (Analisis Lanjut Data Riskesdas 2013). Jur Kes Reprod. 2017; 8(1):63-75.
15. Widjayanti, T.B. Karakteristik Ibu Melahirkan Sectio Caesaria Peserta Jaminan Kesehatan Nasional di Rumah Sakit Profit X di Sekitar Jakarta. Jur Epidemiol Kes Indones. 2020;4(1): 23-8.
16. Saimin J. Pengantar Kesehatan Reproduksi. Surabaya: Airlangga University Press.2016.
17. Wiknjosastro, H. Saifuddin, A.B. Rachimhadhi, T. Ilmu Bedah Kebidanan. Bina Pustaka Sarwono Prawirohardjo. Jakarta. 2010:133-40.
18. Pratiwi, R.A.B., Gunanegara, R.F., Ivone, J. Faktor-faktor yang Mempengaruhi Persalinan dengan Sectio Caesarea di RSUD Lembang pada Tahun 2017. J Med Health. 2019; 2(3): 838-46.