ANALYSIS OF FACTORS INFLUENCING THE INCREASE IN CAESAREAN SECTION DELIVERY CHOICES AT PERMATA HATI HOSPITAL IN KISARAN IN 2024

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ABSTRACT

Every woman wants her birth process to run smoothly and normally. The birth process can be normal (normal parturition), but there are also birth processes that have problems so that an operation called a caesarean section is required. In the past and to this day, sectio caerasea is a scary procedure. But currently the number of cesarean sections is increasing and there are even pregnant women who want to give birth by surgery. The aim of this study was to analyze the factors that influence the increase in the choice of caesarean section delivery at Permata Hati Kisaran Hospital in 2024. Quantitative type of research and cross-sectional design. The sample for this study was 83 women giving birth at Permata Hati Kisaran Hospital using the chi square test and multiple logistic regression analysis. The results of this study show that the most dominant variable is complications during pregnancy (p= 0.00; Exp(B)=31.3). It is recommended that women giving birth with pregnancy complications for both mother and baby should decide on caesarean section because caesarean section be a decision taken immediately due to an emergency situation. So that pregnant women can avoid complications during pregnancy and childbirth later, and it is recommended that midwifery staff carry out more precise anamnesis and examinations of pregnant women because this will have an impact on the type of delivery.

KEYWORDS	*Maternal Age, Number Of Children Born, History Of SC Delivery*

INTRODUCTION

Sectio caerasea *was and still is* a terrifying act. But currently the number of *sectio caerasea* is increasing, and there are even pregnant women who want to give birth by surgery. Sectio *caerasea* delivery is an artificial delivery by making incisions of the abdominal wall and uterine wall with the aim of saving the mother and baby (Suciawati, 2023).

Data from WHO (2021) shows that the number of births *in sectio caerasea* every year increases by an average of 10-15%. We can also see that (2019) at 85 million, in 2020 at 68 million and in 2021 at 373 million. The countries with the

highest *fertility* rate are America at 39.3%, followed by Europe at 25.7% and Asia at 23.1%. This number is predicted to increase until 2030 (W Utami et al., 2020).

In Indonesia, *sectio caerasea delivery* is highest in DKI Jakarta Province (31.3%) and lowest in Papua Province (6.7%) (Ministry of Health of the Republic of Indonesia, 2019). Based on data from the Deli Serdang Health Office, North Sumatra Province, precisely at Lubuk Pakam Hospital, the number of *sectio caerasea* deliveries in 2019 was 254 cases out of 384 (66.14%) deliveries with medical indications of 93.6% and social indications of 6.4% (Sitorus, 2019).

With the increasing number of *cesarean deliveries,* we can see from the medical and non-medical indications seen from the mother and her baby (Zaini et al., 2021). Indications seen from the mother include the mother's age, history of SC childbirth, in babies including the location of breeches, the circumference of the central cord and the abnormal location of the palsenta (Kusumah et al., 2022), while non-medical include the desire of parents to give birth according to the desired date.

Based on the above, the researcher is interested in taking the title "Analysis of Factors Affecting the Increase in *Sectio Caesarea Birth Selection* at Permata Hati Hospital Kisaran in 2024".

RESEARCH METHOD

The type of quantitative research and *cross-sectional design*. with a location at Permata Hati Kisaran Hospital and was carried out in June-July 2024. The population is all mothers giving birth at Permata Hati Kisaran Hospital, with a total population of 488 people in January-June 2024 and a sample of 83 people (*purposive sampling technique*). The data of this study was taken from Permata Hati Kisaran Hospital by looking at the status of the medical records of SC maternity mothers. With univariate, bivariate (chi-square) and multivariate (multiple logistic regression) analysis.

RESULT AND DISCUSSION

Univariate

Table 1. Age Distribution and Number of Children Born to Maternity Mothers at Permata Hati Hospital in 2024

It	Characteristic	N	%
	Age		
1	< 20 years	43	51,8
2	>20 years	40	48,2
	Sum	**83**	**100**
	Number of children born		
1	Primigravida	23	27,7
2	Multigravida	60	72,3

Sum		**83**	**100**

The most maternal age was found in the age category < 20 years old, 43 out of 83 people (51.8%) and the number of children born was the highest in the multigravida category, 60 out of 83 people (72.3%).

Table 2. Distribution of Birth Time Selection, SC Birth History, Complications During Pregnancy and Selection of *Sectio Caesarean* Delivery in Maternity At Permata Hati Hospital Range in 2024

It	Characteristic	n	%
	Selection of birth time		
1	Not choosing the time of birth	37	44,6
2	Choosing a time of birth	46	55,4
	Sum	**83**	**100**
	SC Childbirth History		
1	No history of SC Childbirth	32	38,6
2	There is a history of SC Childbirth	51	61,4
	Sum	**83**	**100**
	Complications during pregnancy		
1	No complications	38	45,8
2	There are complications	45	54,2
	Sum	**83**	**100**
	Selection of *sectio caesarea delivery*		
1	Not voting	29	34,9
2	Choose	54	65,1
	Sum	**83**	**100**

The selection of birth time for mothers giving birth at Permata Hati Hospital The most ranges in the category of choosing the time of birth are 46 out of 83 people (55.4%), the most SC childbirth history in the category is SC childbirth history 51 out of 83 people (61.4%), the most complications during pregnancy in the category there are complications 45 out of 83 people (54.2%) and *the most selection of sectio caesarean* delivery in the category is 54 out of 83 people (65.1%).

Bivariate

Table 3. The Effect of Mother's Age on the Increase in *Sectio Caesarean Delivery,* Selection at Permata Hati Hospital, Kisaran in 2024

Mother's Age	SC Maternity Selection						p	95% Confidence Interval
	Not voting		Choose		Total			
	f	%	f	%	f	%		
< 20 years	7	16,3	36	83,7	43	100		PR : 1.86
							0,00	95% CI
>20 years	22	55	18	45	40	100		(1,28-2,68)

Mothers who gave birth with a maternal age < 20 years most chose *sectio caesarean* delivery as many as 36 out of 43 people (83.7%), while mothers who gave birth with the age of >20 years most did not choose *sectio caesarean delivery* as many as 22 out of 40 people (55%). The value of P = 0.00 indicates that there is an effect of maternal age on the selection *of cesarean delivery*. PR value = 1.86 means that the mother giving birth at the age of <20 years has an estimated risk of 1.86 times choosing *a cesarean section compared to the* mother's age of >20 years.

Table 4
The Effect of the Number of Children Born to Increase the Selection of *Sectio Caesarean* Deliveries at Permata Hati Hospital in 2024

Number of children born	SC Maternity Selection						P	95% Confidence Interval
	Not voting		Choose		Total			
	f	%	F	%	f	%		
Primigravida	14	60,9	9	39,1	23	100		PR : 2.43
							0,00	95% CI
Multigravida	15	25	45	75	60	100		(1,40-4,20)

Mothers who gave birth with multigravida did not choose *sectio caesarean* delivery as many as 15 people (25%), while mothers who gave birth with multigravida most chose *sectio caesarean delivery* as many as 45 people (75%). The value of p = 0.00 indicates that there is an effect of the number of children born on the selection *of cesarean delivery*. The PR value = 2.43 means that mothers who give birth to multigravida have an estimated risk of 2.43 times choosing *a sectio caesarea* delivery compared to primigravida mothers giving birth.

Table 5
The Effect of Birth Time Selection on the Increase in Sectio *Caesarean Delivery* Selection at Permata Hati Hospital in 2024

Birth Time Selection	SC Maternity Selection				Total		p	95% Confidence Interval
	Not voting		Choose					
	f	%	F	%	f	%		
Not voting	26	70,3	11	29,7	37	100		PR : 10.7
							0,00	95% CI
								(3,53-32,8)
Choose	3	6,5	43	93,5	46	100		

Pregnant mothers who did not choose the time of birth did not choose a *sectio caesarean* delivery as many as 26 people (70.3%), while pregnant mothers who chose the most birth time chose a *sectio caesarean delivery* as many as 43 people (93.5%). The value of p = 0.00 that there is an effect of the choice of birth time on the selection *of cesarean delivery*. The PR value = 10.7 means that the estimated risk of giving birth is 10.7 times that the maternity mother who chooses *the birth time chooses a cesarean* delivery compared to the maternity mother who does not choose the birth time.

Table 6
The Effect of SC Childbirth History on the Selection of *Sectio Caesarean*
Delivery at Permata Hati Hospital in 2024

SC Childbirth History	SC Maternity Selection				Total		p	95% Confidence Interval
	Not voting		Choose					
	f	%	f	%	f	%		
No history of SC	22	68,8	10	31,3	32	100		PR : 5.00
							0,00	95% CI
SC History	7	13,7	44	86,3	51	100		(2,42-10,3)

Pregnant women without a history of SC did not choose a *sectio caesarean* delivery as many as 22 people (68.8%), while mothers with a history of SC most chose a *sectio caesarean delivery* as many as 44 people (86.3%). The value of P = 0.00 indicates that there is an effect of SC labor history on the selection *of cesarean delivery*. The PR value = 5.00 means that pregnant women who have a history of SC childbirth have an estimated risk of 5.00 times choosing a *sectio caesarea delivery* compared to a maternity mother who does not have a history of

SC childbirth.

Table 7

The Effect of Complications During Pregnancy on the Increase in Sectio
Caesarean Delivery Selection at Permata Hati Hospital in 2024

Complications During Pregnancy	SC Maternity Selection				Total		p	95% Confidence Interval
	Not voting		Choose					
	f	%	f	%	f	%		
No complications	27	71,1	11	28,9	38	100		PR : 15.9
There are complications	2	4,4	43	95,6	45	100	0,00	95% CI (4,06-62,9)

Pregnant women who had no complications during pregnancy did not choose sectio *caesarean* delivery as many as 27 people (71.1%), while pregnant women who had complications during pregnancy chose sectio *caesarean delivery* as many as 43 people (95.6%). The value of p = 0.00 that there is an effect of complications during pregnancy on the selection *of cesarean delivery*. The pr value = 15.9 means that maternity mothers who have complications during pregnancy have an estimated risk of 15.9 times choosing a *cesarean delivery* compared to maternity mothers who have no complications during pregnancy.

Table 8

Multivariate Analysis of Phase I Effect of Mother's Age, Number of Children Born, Time of Birth, History of SC Childbirth, Complications During Pregnancy on the Increase in Selection of *Sectio Caesarean* Deliveries at Permata Hati Kisaran Hospital
Year 2024

It	Variable	B	S.E	Sig	Exp(B)	95 % CI	
						Lower	Upper
1	Mother's age	-1,71	1,04	0,10	0,18	0,02	1,40
2	Number of children born	-0,46	1,42	0,74	0,62	0,03	10,21
3	Selection of birth time	2,03	0,95	0,03	7,63	1,16	50,08

4	SC delivery history	2,26	1,48	0,12	9,59	0,52	175,0
5	Complications during pregnancy	2,8	1,01	0,00	16,5	2,28	120,5
	Constant	-6,27	2,64	0,01	0,00		

From the table above, there are independent variables that are not significant to the increase in the selection *of cesarean sections* , namely the variables of maternal age, the number of children born, and the history of SC childbirth. Therefore, these variables were issued in multiple regression analysis, to find the most dominant variable that had the most dominant effect on the increase *in the selection of cesarean* section.

Table 9

Multivariate Analysis Phase II The Effect of Birth Time Selection and Complications During Pregnancy on the Increase in Sectio *Caesarea Birth Selection* at Permata Hati Hospital in 2024

It	Variable	B	S.E	Sig	Exp(B)	95 % CI	
						Lower	Upper
1	Selection of birth time	2,95	0,81	0,00	19,28	3,88	95,70
2	Complications during pregnancy	3,44	0,89	0,00	31,3	5,44	180,2
	Constant	-8,31	1,71	0,00	0,00		

From the table above, there are two independent variables that significantly affect the increase in the selection of *cesarean* delivery because each variable has a value of p<0.05. These variables are the variable of birth time selection (p=0.00; Exp(B)=19.28) and complications during pregnancy (p= 0.00; Exp(B)=31,3). From these data, the most dominant variable affecting the increase in the selection *of cesarean delivery* was complications during pregnancy (p=0.00; Exp(B)=31.3), indicating that pregnant women who experienced complications during pregnancy were 31.3 times more likely to choose *a cesarean section* and could increase *cesarean section*.

Discussion

The Effect of Mother's Age on the Increase in Sectio Caesarea Birth Selection

Age can affect the development of an individual's ability to catch and think. As individuals age, they will be more prepared to think and work. In the eyes of society, more mature individuals are more trusted than younger individuals. However, as we get older, there will be factors that inhibit the learning process that result in a decrease in thinking and working power. Pregnancy under the age of <20 years is a high-risk pregnancy because the reproductive system is not optimal, blood circulation to the cervix and also to the uterus is still imperfect so that it can interfere with the process of distributing nutrients from the mother to the fetus (Prawirohardjo, 2019).

Effect of Number of Children Born on Increase in Sectio Caesarean Birth Selection

The number of children born (parity) can affect the selection of SC delivery. Parity is the number of births that produce a fetus that is born alive. Safe parity is 1-2 child counts. Because the number of children born is 1-3 people, it is a very safe parity in terms of bleeding after childbirth. Parity of 0 and >3 people have a high estimated rate of bleeding after childbirth while parity of 0, the possibility of experiencing major complications and abnormalities including his strength, birth canal and condition of the baby, due to the lack of childbirth experience. When more than 3 has a higher mortality rate. The risk of high parity can endanger the fetus and the mother because in the number of births that give birth too often, the uterus will be weaker because uterine scarring due to repeated pregnancies can cause the mother to experience complications during pregnancy and childbirth (Hijriani, 2020).

Effect of Birth Time Selection (Beautiful Date) on the Increase in Sectio Caesarea Birth Selection

The choice of birth time (beautiful date) is a factor that affects the selection of childbirth by *cesarean section*. The selection of the time of birth is the selection of the planned time of birth of the child. Many couples have planned the birth of their child. Nowadays, the timing of birth is a *trend* for all people with high socioeconomic status. In addition to childbirth not interfering with work, planned childbirth can also be influenced by the wishes of family members who want a beautiful date in the birth of their child (Sitorus and Purba, 2019).

The Effect of Sectio Caesarea Birth History on the Increase in Sectio Caesarea Birth Selection

This is because the mother's uterus was injured in the abdomen by an incision in the previous SC delivery, which caused the uterus to tear during vaginal delivery.

The possibility of uterine rupture for women with a background marked with SC is due to SC marks in the injured abdominal tissue (Kusumah, 2023). Mothers who are going to give birth and have a history of SC previously 1 time have the opportunity to give birth normally with the provision that the pregnancy distance is at least 2 years from the previous SC delivery, does not have preeclampsia, the fetus size is not large, is not >35 years old, and the previous SC scar is horizontal and located at the bottom of the abdomen (Fristika, 2023).

CONCLUSION

In this study, the variable that most influenced the increase in the selection *of cesarean delivery* at Permata Hati Hospital was the variable of complications during pregnancy of (p=0.00;OR=31.3). It is recommended that mothers who give birth with pregnancy complications from both the mother and the baby, must decide *on a cesarean section* because *a cesarean section* is a decision that is taken immediately due to an emergency condition. In order for pregnant women to avoid complications during pregnancy and childbirth later, it is necessary to have a mature age and pay attention to nutritional needs during pregnancy and it is recommended to the supervisors of Permata Hati Kisaran Hospital, especially for midwifery employees, to be more appropriate to carry out anamnesa and examination of pregnant women because later it will have an impact on the type of delivery.

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