

The Epidemiological Study of Caesarean Section Cases at Haji Regional General Hospital Makassar in 2024

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Abstrak

Meskipun bermanfaat dalam kondisi tertentu, tren peningkatan tindakan SC tanpa indikasi medis yang jelas menimbulkan kekhawatiran, baik dari sisi klinis maupun epidemiologis. Prevalensi SC di Indonesia meningkat jauh melebihi batas ideal WHO (10-15%). Penelitian ini bertujuan untuk mendeskripsikan karakteristik ibu bersalin dengan tindakan SC di RSUD Haji Makassar tahun 2024 berdasarkan usia ibu, paritas, riwayat persalinan, usia kehamilan, jenis SC berdasarkan waktu pelaksanaannya, dan indikasi medis tindakan SC. Penelitian ini menggunakan desain deskriptif kuantitatif dengan pendekatan retrospektif. Data diambil dari rekam medis 186 ibu bersalin dengan tindakan SC selama tahun 2024. Analisis dilakukan secara univariat menggunakan distribusi frekuensi dan persentase. Hasil menunjukkan mayoritas ibu berada pada usia 20–35 tahun (75,8%), paritas 2 (34,4%), dan memiliki riwayat SC sebelumnya (39,2%). Sebagian besar kehamilan berada pada usia aterm (73,1%) dan tindakan SC dilakukan secara elektif (69,9%). Indikasi terbanyak adalah riwayat SC sebelumnya (38,7%), oligohidramnion (7,5%), gagal induksi (6,5%), dan preeklampsia (5,9%). Hasil juga menunjukkan bahwa ibu usia muda dan primipara lebih sering mengalami SC karena CPD, fetal distress, dan gagal induksi, sedangkan ibu multipara dengan riwayat SC menjalani tindakan ulangan. Ibu dengan paritas tinggi cenderung mengalami komplikasi serius seperti ruptur uteri dan preeklampsia. Tindakan SC di RSUD Haji Makassar tahun 2024 didominasi oleh ibu usia produktif dengan paritas rendah hingga sedang, sebagian besar dilakukan secara elektif, dan didasari oleh indikasi medis seperti SC ulangan dan komplikasi kehamilan. Hasil ini mencerminkan pentingnya pemantauan kehamilan dan evaluasi indikasi SC secara ketat untuk mencegah tindakan yang tidak perlu.

Kata kunci: *Sectio Caesarea*; usia ibu; paritas; indikasi SC

Abstract

Cesarean section (CS) is a delivery method performed when vaginal delivery poses risks to the mother and fetus. Despite its benefit under certain conditions, the increase trend of CS without clear medical indications raises concerns from both clinical and epidemiological perspectives. The rate of CS deliveries in Indonesia has increased far exceeding the WHO's ideal threshold of 10–15%. This study aimed to describe the characteristics of mothers undergoing CS at Haji Regional General Hospital Makassar in 2024 based on maternal age, parity, delivery history, gestational age, type of CS by timing, and medical indications. This study employed a descriptive quantitative design with a retrospective approach. Data were collected from medical records of 186 mothers who underwent CS during 2024. Univariate analysis was conducted using frequency and percentage distributions. The majority of mothers, aged 20–35 years (75.8%), had parity of 2 (34.4%), and had a history of previous CS (39.2%). Most pregnancies were at term (73.1%), and most CS procedures were elective (69.9%). The most common indications were previous CS (38.7%), oligohydramnios (7.5%), failed induction (6.5%), and preeclampsia (5.9%). The findings showed that younger mothers and primiparas were more likely to undergo CS due to cephalopelvic disproportion (CPD), fetal distress, and failed induction, while multiparas with a history of CS tended to have repeat procedures. High-parity mothers were more prone

to severe complications such as uterine rupture and preeclampsia. These results highlight the importance of careful pregnancy monitoring and strict evaluation of CS indications to prevent unnecessary procedures.

Keywords : Cesarean section, maternal age, parity, CS indication, descriptive.

INTRODUCTION

Caesarea Section (CS), or cesarean section, is a method of childbirth that is medically indicated when vaginal delivery poses risks to either the mother or the infant. Although CS provides significant benefits in certain clinical situations, the rising trend of cesarean deliveries without clear medical indications has raised concerns both clinically and epidemiologically. According to data from the “Survei Demografi dan Kesehatan Indonesia (SDKI)”, the prevalence of cesarean deliveries in Indonesia has steadily increased from 17.6% in 2018 to approximately 25.9% in 2023. This number far exceeds the World Health Organization (WHO) recommendation, which defines the ideal rate of cesarean sections to be around 10–15% of all deliveries (Ulfa, Ramadianti, and Andriani, 2024); WHO, 2015). Although the official SDKI data for 2024 have not yet been released, projections based on the annual growth trend suggest that the rate remains above 25%, reflecting a persistently high tendency toward cesarean deliveries at the national level.

The increase in cesarean deliveries is influenced by multiple factors, including maternal characteristics, obstetric conditions, previous birth history, as well as patient and healthcare provider preferences. On the other hand, performing CS without strong medical indications may elevate the risk of various complications, such as infections, hemorrhage, and placental abnormalities in subsequent pregnancies (Nuryanto, 2024); (Saputri, Maryati, and Nurhayati, 2023). Furthermore, excessive cesarean procedures contribute to higher healthcare costs and hospital resource utilization, particularly in referral facilities such as RSUD Haji Makassar, which serves as one of the maternal referral hospitals in South Sulawesi Province.

The internal data from RSUD Haji Makassar indicate that the number of cesarean deliveries has fluctuated over the past three years: 174 cases in 2022, increasing to 214 cases in 2023, and recorded 186 cases in 2024. Although a slight decline was observed in the most recent year, these figures demonstrate that CS remains one of the most frequently chosen or indicated delivery methods at RSUD Haji Makassar. The present study focuses on CS cases at RSUD Haji Makassar in 2024, aiming to examine the risk factors, proportions, and epidemiological characteristics associated with cesarean deliveries. The findings are expected to provide a comprehensive overview of the determinants of CS at the hospital level, thereby serving as a basis for formulating clinical policies and targeted interventions to reduce unnecessary cesarean sections and improve the quality of maternal and obstetric care in the future.

Several similar studies on Cesarean Section (CS) procedures have been conducted in various regions of Indonesia as well as internationally. The study by Islam (Islam et al. 2022), which analyzed data from the Indonesia Demographic and Health Survey (IDHS), showed an increasing trend in CS rates nationwide, particularly among mothers living in urban areas and those with higher socioeconomic status. This study highlighted disparities in access to and indications for CS based on socioeconomic factors but did not examine the clinical aspects of each case in detail. These findings differ from the present study, which focuses on hospital-based data with an analysis of clinical variables such as maternal age, parity, obstetric history, and surgical indications.

In addition, research by Kumar (Kumar et al. 2023) also emphasized socioeconomic inequalities in the performance of CS in Indonesia and found that a considerable proportion of procedures were carried out without urgent medical indications. Unlike that study, the research conducted at RSUD Haji Makassar in 2024 provides a more detailed overview of the types of CS (elective and emergency) and the direct clinical causes at a referral hospital level.

Similar hospital-based studies, such as those conducted at RSUD Gunung Jati Cirebon, reported that the most common indications for CS were previous CS history, prolonged labor and maternal age (Prihartini and Iryadi 2019). However, each region demonstrates different patterns. Therefore, the study at RSUD Haji Makassar has its own urgency in describing the local characteristics and trends of CS cases in South Sulawesi. The findings can serve as a comparative reference for other hospitals and as a foundation for developing regional maternal health policies.

Thus, considering the increasing trend of cesarean section rates, significant local variations, and their clinical and financial consequences, this epidemiological study of CS cases at RSUD Haji Makassar in 2024 is crucial to provide a localized overview that can be used to improve the quality of maternal healthcare services, reduce unnecessary cesarean procedures, and formulate more effective clinical and operational recommendations.

METHODS

This study was a descriptive research design with a retrospective approach. The main purpose was to obtain an overview of the frequency distribution of cesarean section (CS) cases based on the epidemiological dimensions of person, place, and time, which included maternal age, parity, history of previous deliveries, gestational age, type of CS according to the timing of the procedure (elective or emergency), and medical indications for CS. The study was conducted at RSUD Haji Makassar, utilizing secondary data obtained entirely from the hospital's 2024 medical records.

The study population was all cesarean patients registered at RSUD Haji Makassar during 2024. The sampling technique applied was total sampling, meaning that all CS patients recorded in the hospital's medical database were included as research subjects, amounting to 186 cases. This approach was intended to ensure that the study findings provide a comprehensive depiction of the epidemiological

pattern of CS at the hospital. The variables examined in this study included: maternal age, parity, delivery history, gestational age, type of CS based on implementation time (elective or emergency), and medical indications for performing the procedure.

Data were analyzed using univariate analysis to describe the characteristics of each variable, particularly in relation to the epidemiological dimensions of person, place, and time. Furthermore, cross-tabulation (two-way tables) was conducted to identify the frequency distribution between pairs of variables, thereby allowing the researcher to interpret the existing trends and relationships among those variables.

RESULTS

The total number of deliveries performed by Cesarean Section (CS) at RSUD Haji Makassar in 2024 was 186 cases. The data were presented to describe several determining factors, including maternal age, parity, delivery history, gestational age, type of CS based on implementation time (elective or emergency), and medical indications for performing the procedure. The data are presented in Table 1 to Table 4.

Tabel 1. Frequency distribution of Cesarean Section (CS) Cases by Epidemiological Aspects (Age, Parity, Delivery History, Gestational Age, Type of CS, Indication for CS) at RSUD Haji Makassar in 2024

No	Category	Group	Number (n)	Percentage (%)
A.	Age (Years)	20–35	141	75.8
		< 20	8	4.3
		> 35	37	19.9
		Total	186	100
B.	Parity	1	52	28.0
		2	64	34.4
		3	47	25.3
		4	18	9.7
		5	4	2.2
		6	1	0.5
		Total	186	100
C.	Delivery History	No history	52	28.0
		Vaginal delivery	61	32.8
		Caesarean section	73	39.2
		Total	186	100
D.	Gestational Age	Term (Aterm)	136	73.1
		Post-term	36	19.4
		Pre-term	14	7.5
		Total	186	100
E.	Type of CS	Elective	130	69.9
		Emergency	56	30.1
		Total	186	100
F.	Indications for CS	CPD	7	3.8
		Eklampsia	3	1.6

Fetal Distress	10	5.4
Failed Induction	13	7.0
Gemeli	3	1.6
Gestational hypertension	5	2.7
Prolonged 1st stage of labor	8	4.3
Prolonged 2nd stage of labor	3	1.6
PROM/PPROM	3	1.6
Transverse lie	4	2.2
Breech presentation	6	3.2
Macrosomic fetus	2	1.1
Oligohydramnios	14	7.5
Placenta previa	8	4.3
Preeclampsia	11	5.9
Umbilical cord prolapse	2	1.1
Previous cesarean delivery	72	38.7
Uterine rupture	1	0.5
Post-Term	8	4.3
Abruptio placentae	3	1.6
Total	186	100

Source : Medical Record Data RSUD Haji Makassar 2024.

Tabel 2. Cross-Tabulation of Cesarean Section Indications by Maternal Age

No	Indications for CS	Age (Years)			Total
		20 – 35	< 20	> 35	
1	CPD	5	2	0	7
2	Eklampsia	2	1	0	3
3	Fetal Distress	9	1	0	10
4	Failed Induction	10	0	3	13
5	Gemeli	2	0	1	3
6	Gestational hypertension	4	0	1	5
7	Prolonged 1st stage of labor	6	1	1	8
8	Prolonged 2nd stage of labor	1	0	2	3
9	PROM/PPROM	3	0	0	3
10	Transverse lie	4	0	0	4
11	Breech presentation	5	0	1	6
12	Macrosomic fetus	1	0	1	2
13	Oligohydramnios	12	0	2	14
14	Placenta previa	3	2	3	8
15	Preeclampsia	10	0	1	11
16	Umbilical cord prolapse	2	0	0	2
17	Previous cesarean delivery	55	0	17	72
18	Uterine rupture	0	0	1	1
19	Serotinus	7	0	1	8

20	Abruptio placentae	0	1	2	3
Total		141	8	37	186

Source : Medical Record Data RSUD Haji Makassar 2024.

Tabel 3. Cross-Tabulation of Cesarean Section Indications by Parity

No	Indications for CS	Parity						Total
		1	2	3	4	5	6	
1	CPD	7	0	0	0	0	0	7
2	Eklampsia	1	1	1	0	0	0	3
3	Fetal Distress	7	2	1	0	0	0	10
4	Failed Induction	6	2	3	1	0	0	13
5	Gemeli	0	2	1	0	0	0	3
6	Gestational hypertension	2	0	2	1	0	0	5
7	Prolonged 1st stage of labor	4	1	2	1	0	0	8
8	Prolonged 2nd stage of labor	0	0	2	1	0	0	3
9	PROM/PPROM	1	1	1	0	0	0	3
10	Transverse lie	1	2	1	0	0	0	4
11	Breech presentation	5	0	1	0	0	0	6
12	Macrosomic fetus	1	0	1	0	0	0	2
13	Oligohydramnios	3	5	3	3	0	0	14
14	Placenta previa	3	2	1	1	1	0	8
15	Preeclampsia	6	2	2	0	0	1	11
16	Umbilical cord prolapse	0	2	0	0	0	0	2
17	Previous cesarean delivery	0	38	24	8	2	0	72
18	Uterine rupture	0	0	0	0	1	0	1
19	Serotinus	4	4	0	0	0	0	8
20	Abruptio placentae	1	0	1	1	0	0	3
Total		52	64	47	18	4	1	186

Source : Medical Record Data RSUD Haji Makassar 2024.

Tabel 4. Cross-Tabulation of Cesarean Section Indications by delivery history

No	Indikasi SC	Delivery History			
		No History	Vaginal Delivery	CS	Total
1	CPD	7	0	0	7
2	Eklampsia	1	2	0	3
3	Fetal Distress	7	3	0	10
4	Failed Induction	6	7	0	13
5	Gemeli	0	3	0	3
6	Gestational hypertension	2	3	0	5
7	Prolonged 1st stage of labor	4	4	0	8

8	Prolonged 2nd stage of labor	0	3	0	3
9	PROM/PPROM	1	2	0	3
10	Transverse lie	1	3	0	4
11	Breech presentation	5	1	0	6
12	Macrosomic fetus	1	1	0	2
13	Oligohydramnios	3	11	0	14
14	Placenta previa	3	5	0	8
15	Preeclampsia	6	5	0	11
16	Umbilical cord prolapse	0	2	0	2
17	Previous cesarean delivery	0	0	72	72
18	Uterine rupture	0	0	1	1
19	Serotinus	4	4	0	8
20	Abruptio placentae	1	2	0	3
Total		52	61	73	186

Source : Medical Record Data RSUD Haji Makassar 2024.

DISCUSSION

The data shown in Table 1 to Table 4 indicate that the majority of mothers who underwent Cesarean Section (CS) were within the 20–30 years age group, totaling 141 individuals (75.8%). This age range is classified by the World Health Organization (WHO) as the period of optimal reproductive health, which spans from 20 to 35 years. However, there were also 8 mothers (4.3%) under the age of 20 and 37 mothers (19.9%) above the age of 35 who underwent cesarean delivery.

Mothers aged below 20 years fall into the category of too young for pregnancy, which poses a higher risk of complications such as preeclampsia, preterm labor, and the need for operative delivery. Conversely, pregnancies in women aged over 35 years are considered high-risk pregnancies due to the increased likelihood of complications such as hypertensive disorders in pregnancy, gestational diabetes, and fetal growth restriction, all of which may lead to medical indications for cesarean section.

A study conducted by Wulandari (Wulandari and Sumanti 2022) found that maternal age younger than 20 years and older than 35 years had a significant relationship with the increased rate of cesarean delivery. Both age extremes are more vulnerable to obstetric complications compared to women in the optimal reproductive age range. Furthermore, it was reported that mothers aged over 35 years were twice as likely to undergo cesarean section compared to those aged 20–30 years, primarily due to the higher medical risks associated with advanced maternal age (Sari, Mendrofa, and Hendrawan 2025). The findings of this study are consistent with previous research, reaffirming that maternal age remains one of the most influential determinants of cesarean section. Younger mothers often face anatomical and physiological immaturity, while older mothers are more prone to chronic conditions and pregnancy-related complications, both of which necessitate surgical intervention for maternal and fetal safety.

The data indicate that most mothers who underwent Cesarean Section (CS) had low to moderate parity. The largest group consisted of multiparous mothers (parity 2) with 64 individuals (34.4%), followed by primiparous mothers (parity 1) totaling 52 individuals (28.0%), parity 3 with 47 individuals (25.3%), and parity 4 with 18 individuals (9.7%). Meanwhile, a smaller proportion of mothers had high parity (grand multiparity, parity ≥ 5), comprising 5 individuals (2.6%), including 4 mothers (2.2%) with parity 5 and 1 mother (0.5%) with parity 6.

Clinically, high parity is known to increase the risk of obstetric complications such as uterine atony, placenta previa, and uterine rupture, all of which often serve as indications for cesarean section. On the other hand, primiparous mothers also tend to have a higher likelihood of undergoing cesarean delivery, particularly when the first labor fails to progress or when premature rupture of membranes occurs.

A study on factors of SC found that mothers with parity 1 had a higher risk of cesarean section compared to multiparous mothers due to the lack of prior childbirth experience, which predisposes them to dystocia or failure of labor progression (Nur Handayani, 2022). Similarly, another study reported that high parity (≥ 4) was correlated with an increased incidence of cesarean section, attributed to the elevated risk of postpartum hemorrhage and abnormal fetal presentations in grand multiparous women (Etty, Damanik, and Nababan 2023). The findings of this study align with the existing literature, suggesting that both low and high parity contribute to an increased likelihood of cesarean section, albeit through different mechanisms. Primiparous women face challenges related to the inefficiency of uterine contractions and unfamiliarity with the birthing process, while grand multiparous women are more prone to uterine fatigue and placental complications resulting from repeated pregnancies.

The data showed that the majority of mothers who underwent Cesarean Section (CS) in 2024 had a previous history of cesarean delivery, accounting for 73 individuals (39.2%). This finding reflects a high rate of repeat sections, referring to cesarean procedures performed on women with a prior CS history. Repeat sections are often conducted as elective procedures, primarily due to concerns over the risk of uterine rupture during vaginal birth after cesarean (VBAC).

A total of 61 mothers (32.8%) had a history of previous vaginal delivery but underwent CS in their current pregnancy. This could be attributed to the emergence of new obstetric complications such as placenta previa, fetal distress, or preeclampsia. Meanwhile, 52 mothers (28.0%) had no previous childbirth history (primigravida). In this group, CS was generally performed due to failed vaginal delivery, including causes such as uterine dysfunction, premature rupture of membranes, or fetal distress.

Mothers with a history of previous cesarean section are three to four times more likely to undergo a subsequent SC compared to those with a history of vaginal birth (Gustika Anggriani 2022). This tendency is largely influenced by medical caution concerning uterine rupture, particularly in facilities where VBAC (Vaginal Birth After Cesarean) is not routinely supported. Similarly, another study also found that primigravida also demonstrate a high rate of cesarean deliveries, mainly due to

failure of labor progression, which may result from a lack of understanding of the birthing process or high maternal anxiety during labor (Juliathi, Marhaeni, and Mahayati 2021). The findings of this study are consistent with the literature, suggesting that both previous cesarean history and primigravida status contribute significantly to the likelihood of cesarean delivery. Inadequate clinical support for VBAC, coupled with psychological and physiological factors among first-time mothers, continues to drive the increasing trend of cesarean sections in clinical practice.

The majority of Cesarean Section (CS) procedures were performed at term gestational age (37–42 weeks), accounting for 136 cases (73.1%). This indicates that most SC procedures were carried out during the gestational period considered optimal for delivery, whether elective or emergency. A total of 36 cases (19.4%) occurred at post-term gestational age (>42 weeks). Post-term pregnancies tend to be associated with increased risks of complications such as placental insufficiency, reduced amniotic fluid volume, and fetal distress, which often serve as clinical indications for cesarean delivery. Meanwhile, 14 cases (7.5%) occurred in preterm pregnancies (<37 weeks). Cesarean deliveries in preterm pregnancies are generally performed due to obstetric emergencies, including severe preeclampsia, premature rupture of membranes (PROM), or intrauterine growth restriction (IUGR).

A study on the reasons of SC reported that cesarean sections are most frequently performed at term gestational age, for both elective and emergency indications (Purwanti 2024). The same study also noted that in post-term pregnancies, the risk of fetal distress increases up to threefold, prompting clinicians to opt for cesarean delivery to prevent fetal complications (Purwanti 2024). Furthermore, it was found that preterm pregnancies complicated by pathological conditions, such as severe preeclampsia and premature rupture of membranes (PROM), are the leading causes of cesarean delivery at gestational ages below 37 weeks (Ikhlasia and Riska 2017).

The data show that the majority of Cesarean Section (CS) procedures were performed electively, totaling 130 cases (69.9%). This finding indicates that many CS procedures were planned in advance based on antenatal assessments that revealed specific indications such as placenta previa, a history of previous CS, or fetal presentations incompatible with vaginal delivery. Meanwhile, 56 cases (30.1%) were performed as emergency (cyto) procedures. Emergency CS is typically conducted in critical situations such as fetal distress, severe preeclampsia, placental abruption (*solutio placentae*), or failure of labor progression, where continuing vaginal delivery could endanger both the mother and the fetus.

Elective CS is more prevalent in referral hospitals, as many mothers are referred due to a previous history of CS, breech presentation, or high-risk pregnancies that have been identified during antenatal care (Ananda et al. 2025). Furthermore, although emergency CS is more commonly associated with acute and urgent conditions, the number of elective CS procedures has been increasing in recent years (Rahmawati 2021). This rise is largely attributed to improved antenatal screening and early detection of obstetric complications, allowing clinicians to plan safer and more controlled deliveries.

The results of this study indicate that the most dominant indication for performing a Cesarean Section (CS) was a history of previous CS, accounting for 72 cases (38.7%). This finding supports previous evidence suggesting that a large proportion of CS procedures are elective repeat sections, particularly in healthcare facilities that do not yet support vaginal birth after cesarean (VBAC).

Other frequently observed indications included oligohydramnios (7.5%), failed induction (7%), preeclampsia (5.9%), and fetal distress (5.4%). These conditions reflect complications arising from both maternal and fetal factors, which could endanger the safety of labor if vaginal delivery were attempted. Meanwhile, acute obstetric emergencies such as uterine rupture, placental abruption (solutio placentae), and umbilical cord prolapse were relatively rare but required immediate CS intervention due to their life-threatening nature for both mother and fetus.

A study showed that a previous CS history was the leading cause of elective CS in referral hospitals, primarily due to concerns over uterine rupture during VBAC (Musyaffa 2023). In contrast, study by Ayuningtyas reported that emergency CS is most commonly performed due to fetal distress, preeclampsia, and failed induction (Ayuningtyas et al. 2018), which is consistent with the findings observed at RSUD Haji Makassar.

The 20–35 years age group constituted the dominant category, comprising 141 mothers (75.8%). The most frequent indications for Cesarean Section (CS) in this group were previous CS (55 cases), oligohydramnios (12), failed induction (10), preeclampsia (10), and fetal distress (9). This group exhibited nearly all variations of indications, reflecting that although this age range is considered optimal for reproduction, obstetric risks remain high without adequate antenatal supervision throughout pregnancy.

The <20 years age group, representing 8 mothers (4.3%), falls into the category of too young for pregnancy. The dominant indications were placenta previa, placental abruption (solutio placentae), eclampsia, and cephalopelvic disproportion (CPD). Mothers in this age group tend to experience serious obstetric complications and emergencies, likely due to physical and psychological immaturity as well as insufficient antenatal care.

The >35 years age group, comprising 37 mothers (19.9%), represents high-risk pregnancies. The main indications were previous CS (17 cases), failed induction, oligohydramnios, placenta previa, and prolonged second stage of labor. Common complications in this group included preeclampsia, macrosomia, and uterine rupture. These findings align with existing literature stating that advanced maternal age is associated with an increased risk of labor complications and the need for surgical intervention.

According to Susanti (2021), women aged >35 years are more likely to experience preeclampsia, failed induction, and uterine rupture, all of which increase the likelihood of undergoing CS. Meanwhile, Hamzah and Saimin (2025) found that younger mothers (<20 years) tend to experience placental complications and CPD due to the immaturity of reproductive organs, making CS more frequently indicated. Serudji (Serudji, Agus, and Aninora 2019) emphasized that a history of CS is more

common among women of reproductive age (20–35 years); however, the rate of repeat CS increases with advancing maternal age.

The primary indications for Cesarean Section (CS) among primiparous mothers were cephalopelvic disproportion (CPD) (7 cases), fetal distress (7), failed induction (6), and breech presentation (5). Primiparous women are more likely to experience labor dysfunction and abnormal fetal presentation, as the uterus and birth canal have not undergone prior labor. This finding is consistent to Kusumawardhani, who stated that primiparous mothers are at higher risk of experiencing CPD and failure of labor progression (Kusumawardani and Wulandari 2022).

Among multiparous mothers, the leading indication for CS was a history of previous CS, with 38 cases in parity 2, 24 cases in parity 3, and 8 cases in parity 4. This reflects the high rate of repeat cesarean sections in multiparous women with prior CS history. Other notable indications included oligohydramnios, preeclampsia, and failed induction. In contrast, grand multiparous mothers ($n = 5$) underwent CS primarily due to failed oxytocin drip, uterine rupture, preeclampsia, and placenta previa. These findings are in line with Sutrisna and Fitriyani (Sulastri et al. 2019), who reported that high parity increases the risk of serious obstetric complications, including uterine rupture and placental abnormalities

For primigravida mothers (those who have never given birth), the dominant indications were CPD (7 cases), fetal distress (7), and failed induction (6). Other significant indications included preeclampsia (6), breech presentation (5), and post-term pregnancy (4). This suggests that mothers without prior delivery experience tend to face primary labor disorders, such as inefficient uterine contractions and abnormal fetal presentations.

Mothers with a history of vaginal delivery frequently experienced oligohydramnios (11 cases), failed induction (7), and preeclampsia (5). Other indications observed included transverse lie, prolonged first stage of labor, and placental abruption. These findings suggest that even mothers who have previously delivered vaginally remain at risk of obstetric complications that may necessitate a Cesarean Section (CS).

In contrast, mothers with a history of previous CS (73 cases) all underwent repeat CS, either due to their prior CS history or associated complications such as uterine rupture (1 case). No other indications were identified, as the majority of procedures in this group were elective repeat CS, performed as a preventive measure against uterine rupture and other complications.

According to Ikhlasia and Riska (2017), primigravida mothers are more susceptible to cephalopelvic disproportion (CPD) and abnormal fetal presentation, making them more likely to undergo CS during their first delivery. Putri and Rahayu (Guise et al. 2003) explained that mothers with a previous CS history are often not offered vaginal birth after cesarean (VBAC) in limited-resource facilities, leading to the scheduling of elective CS instead. Furthermore, Prasetya (Prasetya 2024) stated that even mothers with a history of vaginal delivery may still require CS in subsequent pregnancies if new obstetric complications arise, such as preeclampsia or premature rupture of membranes (PROM).

CONCLUSION

Based on the descriptive analysis of 186 mothers who underwent Caesarean Section (CS) at RSUD Haji Makassar in 2024, it can be concluded that the majority of mothers who underwent CS were in the 20–35 years age group (75.8%), which is biologically considered the optimal reproductive age. However, CS cases were also found among mothers aged <20 years (4.3%) and >35 years (19.9%), who are at higher risk of obstetric complications such as preeclampsia, placenta previa, and uterine rupture. Most mothers had parity of 2 (34.4%) and 1 (28.0%). The indications for CS among primiparous mothers were mainly due to labor progression disorders (CPD, fetal distress, breech presentation), while among multiparous mothers, the dominant reason was a history of previous CS, indicating a tendency for repeat caesarean deliveries.

Mothers with a history of previous CS constituted the largest proportion (39.2%), followed by those with a history of vaginal delivery (32.8%) and nulliparous mothers (28%). Almost all CS procedures in mothers with previous CS were performed electively as repeat sections. Most CS procedures were performed at term gestational age (73.1%), followed by post-term (19.4%) and preterm (7.5%). This indicates that most CS deliveries were planned at full-term pregnancies; however, preparedness is still needed for cases of post-term or preterm pregnancies.

Most CS procedures were elective (69.9%), while emergency (cyto) CS accounted for 30.1%. This suggests that pregnancy risk detection and delivery planning were relatively well managed, although obstetric emergencies still occurred. The main indication for CS was a history of previous CS (38.7%), followed by oligohydramnios (7.5%), failed induction (6.5%), preeclampsia (5.9%), and fetal distress (5.4%). In mothers aged <20 years and primiparous women, indications such as CPD, eclampsia, and fetal distress were more prominent, whereas those aged >35 years were more prone to complications such as uterine rupture and preeclampsia. Younger mothers (<20 years) and primiparous women tended to undergo CS due to acute complications during their first labor, while multiparous women (parity 2–3) frequently underwent repeat CS. Mothers with a history of vaginal delivery still faced CS risks due to new pregnancy complications.

Caesarean Section procedures at RSUD Haji Makassar in 2024 were predominantly performed on women of reproductive age with low to moderate parity, mostly carried out electively with the most common indication being a history of previous CS. Although most pregnancies reached full term, various obstetric complications remained the main causes of CS, emphasizing the importance of close pregnancy monitoring and effective referral management to prevent emergency deliveries.

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