OPEN ACCESS

Orapuh Journal

ORIGINAL ARTICLE

Journal of Oral & Public Health

Drivers of negative caesarean section experiences in Haut Uélé Province, Democratic Republic of the Congo

Boya, V. B.[1], Kangite, J. M.[2], Mawunu, M.[3], Ngbolua, K. N.[4,5], Tshitadi, A. M.[1], Omanyondo, M. O.[1], & Mbungu, R. M.[6]

[1]*Doctoral School in Health Sciences, Higher Institute of Medical Techniques of Kinshasa, Kinshasa, Democratic Republic of the Congo*
[2]*Health Organizations Management Section, Higher Institute of Medical Techniques of Kinshasa, Kinshasa, Democratic Republic of the Congo*
[3]*Polytechnic Institute of Kimpa Vita University, Angola*
[4]*Department of Biology, Faculty of Science and Technology, University of Kinshasa, Kinshasa, Democratic Republic of the Congo*
[5]*Center for Research in Pharmacopoeia and Traditional Medicine, Higher Institute of Medical Techniques, Kinshasa, Democratic Republic of the Congo*
[6]*Department of Gynaecology and Obstetrics, University Clinics of Kinshasa, University of Kinshasa, Kinshasa, Democratic Republic of the Congo*

ARTICLE INFO

Received: *13 October 2024*
Accepted: *19 November 2024*
Published: *29 November 2024*

Keywords:
Associated factors, caesarean section, reducing negative experiences, midwife training

Peer-Review: *Externally peer-reviewed*

Correspondence to:
Prof. Koto-Te-Nyiwa Ngbolua
jpngbolua@unikin.ac.cd

To cite:
Boya, V. B., Kangite, J. M., Mawunu, M., Ngbolua, K. N., Tshitadi, A. M., Omanyondo, M. O., & Mbungu, R. M. (2024). Drivers of negative caesarean section experiences in Haut Uélé Province, Democratic Republic of the Congo. *Orapuh Journal*, *5*(6), e1159
https://dx.doi.org/10.4314/orapj.v5i6.59

ISSN: *2644-3740*

Published by Orapuh, Inc. (info@orapuh.org)

Editor-in-Chief: Prof. V. E. Adamu
Orapuh, Inc., UMTG PMB 405, Serrekunda, The Gambia, editor@orapuh.org.

ABSTRACT

Introduction

Caesarean section is a commonly performed obstetric procedure that is often associated with a higher rate of peri- and post-operative complications. These complications include anaesthetic problems, haemorrhage, lower uterine segment tears, bladder and bowel injuries, ureteral lesions, infections, thromboembolic risks, anaemia, and bowel transit disorders. These issues can negatively impact women's perceptions and experiences of caesarean section, affecting their overall experience of the procedure.

Purpose

This study aims to identify the factors associated with negative experiences of caesarean section to help improve women's experiences with this procedure in Haut Uélé Province.

Methods

This was a quantitative, descriptive, and correlational study designed to explore the determinants of negative experiences among women who had undergone caesarean sections in this local context.

Results

The study's findings demonstrated the positive impact of midwife training on reducing negative experiences of caesarean sections. Factors associated with negative perceptions included a lack of communication about the diagnosis before surgery, inadequate disclosure of the need for a caesarean section, an unhealthy hospital environment, and poor family perceptions of the procedure.

Conclusion

Improving communication, enhancing the hospital environment, and fostering better family understanding of caesarean sections can help reduce the negative experiences associated with this procedure. Enhanced training for midwives plays a critical role in achieving more positive outcomes for women undergoing caesarean sections.

INTRODUCTION

Cesarean delivery (C-section) is a surgical procedure performed to deliver a baby by making incisions in the abdomen and uterus of the mother. It is typically conducted when vaginal deliveries pose a risk to the health of the mother or baby or when complications arise during labour. Common indications for cesarean delivery include fetal distress, abnormal positioning of the baby, complications during birth, or a previous history of cesarean birth (Carter & Walker, 2022; Sung et al., 2024).

While the complications associated with C-sections are widely recognized, this study focuses on exploring the unique social and environmental factors influencing women's experiences in Haut Uélé, a region characterised by inadequate infrastructure, limited healthcare resources, and a lack of family support. These contextual issues are particularly relevant to understanding negative perceptions of C-sections. Cesarean sections are often associated with higher rates of peri- and post-operative complications compared to vaginal deliveries, significantly increasing the risk of maternal mortality (Jacques, 2017; Yaqoub et al., 2022; Liu et al., 2023; Duran & Vural, 2023). Common complications, including dystocia, haemorrhage, severe hypertension, and infections, frequently contribute to negative maternal experiences and are often attributed to inadequate management (CPS/SSDSPF, INSTAT/MPATP, INFO-STAT, & ICF International, 2014).

These challenges are exacerbated by healthcare providers' inability to manage patients effectively, unsanitary hospital environments, poor interpersonal relationships, and insufficient medical equipment. The disparities between developed and developing countries highlight the significant challenges faced in regions like sub-Saharan Africa, where maternal experiences during childbirth are notably more negative (Shuman et al., 2023). For instance, in Senegal and Mali, maternal mortality ratios associated with cesarean sections are estimated at 392 and 368 per 100,000 live births, respectively, perpetuating fear and anxiety about cesarean delivery (INSTAT/MPATP, INFO-STAT, & ICF International, 2014).

According to data from 2010–2018 covering 154 countries and accounting for 94.5% of the world's live births, 21.1% of women worldwide delivered via cesarean section. Rates ranged from 5% in sub-Saharan Africa to 42.8% in Latin America and the Caribbean. Since 1990, cesarean section rates have increased globally, with the largest increases observed in East Asia (44.9 percentage points), West Asia (34.7 percentage points), and North Africa (31.5 percentage points). In contrast, sub-Saharan Africa and North America experienced the lowest increases, at 3.6% and 9.5%, respectively. By 2030, it is predicted that 28.5% of women worldwide will deliver via cesarean section, equating to 38 million cesareans annually, with 33.5 million occurring in low- and middle-income countries (Betrán et al., 2021).

To improve affordability, many sub-Saharan African countries have implemented subsidisation or exemption policies for obstetric services. For example, Senegal introduced free cesarean section fees in 2005 in referral hospitals located in disadvantaged regions. Similarly, Mali adopted a nationwide policy in 2006, funded through the state budget, to provide cesarean kits and subsidise costs in regional hospitals (Witter, 2024). While these initiatives have increased cesarean section rates at both community and hospital levels, they have not consistently improved the quality of care (Dumont, 2017). Moreover, excessively high cesarean rates, especially in emergencies, may negatively impact maternal and perinatal health, underscoring the importance of carefully evaluating indications for cesarean delivery (Koudnoaga, 2015).

In the Democratic Republic of the Congo (DRC), the introduction of free childbirth services by President Félix Tshisekedi aims to provide women and their newborns with free access to adequate maternity care, partly funded by the United Nations. This initiative marks progress towards achieving the Sustainable Development Goals (Mbongi, 2023). By offering access to quality antenatal care, safe delivery, and postnatal care, the policy seeks to reduce maternal and infant mortality.

However, in Haut Uélé Province, childbirth, particularly cesarean sections, is often perceived as a traumatic experience. Painful memories of maternal or neonatal death, severe infections, financial losses, and other complications highlight the importance of holistic and supportive management before, during, and after cesarean sections to improve women's experiences. This study

investigates the frequency of cesarean sections at Isiro General Referral Hospital, identifies factors associated with negative experiences, examines the influence of midwife training, and assesses the socio-demographic and clinical profiles of participants. It hypothesises that inadequate communication, unhealthy environments, and negative family perceptions contribute to negative experiences, whereas adequate midwife training can play a critical role in mitigating these outcomes.

METHODS

Selection of Participants

Participants included patients and their family members selected through non-probability purposive sampling. This approach was chosen to target individuals with specific characteristics relevant to the study, ensuring the inclusion of diverse perspectives (Palinkas et al., 2015). The selection process involved identifying patients currently receiving care at Isiro General Referral Hospital and their accompanying family members, prioritising those with firsthand experience of the healthcare system. Purposive sampling ensured that participants were well-suited to provide insights into the factors influencing negative experiences in care.

Ensuring Data Reliability and Reducing Interviewer Bias

Data were collected through in-person interviews, and several steps were taken to ensure reliability and minimise interviewer bias:

1. Training of Interviewers: Interviewers received standardised training to adhere to consistent questioning techniques and avoid leading questions (Patton, 2015).
2. Pilot Testing: Interview tools were pilot-tested to refine question phrasing and structure for clarity and neutrality (Turner, 2010).
3. Use of Structured Interview Guides: A structured guide was employed to maintain consistency across all interviews, ensuring that all participants were asked the same core questions (Yin, 2018).
4. Triangulation: Responses were cross-validated with secondary data sources where applicable to ensure accuracy and reliability (Flick, 2018).

Analytical Approach

The data were analysed using Chi-square tests and logistic regression analyses. Chi-square tests examined associations between categorical variables, providing insights into potential patterns and disparities (McHugh, 2013). Logistic regression identified and quantified factors influencing negative experiences, offering a more nuanced understanding of the predictors (Hosmer et al., 2013). These methods were justified as they enabled the identification of statistically significant relationships and the evaluation of the relative importance of various factors.

Microsoft Excel 2010 and Stata 13 software were used for data analysis. Excel was primarily utilised for data organisation, initial cleaning, and preliminary calculations, while Stata was employed for in-depth statistical analyses, including association tests and appropriate modelling (StataCorp, 2013).

Ethical Considerations

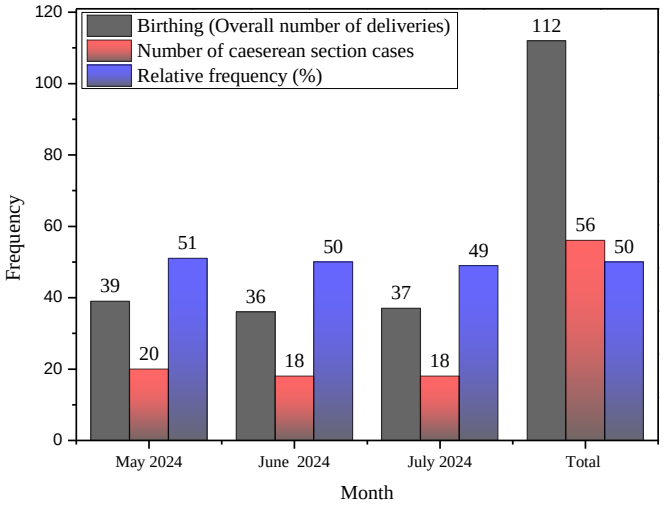
Ethical approval was obtained from the Ethics Committee of the Higher Institute of Medical Technologies of Kinshasa (Decision No. 055/ESU/ISTM/DG/2022), ensuring compliance with ethical guidelines for research involving human participants. Informed consent was obtained from all participants before data collection. They were briefed about the study's purpose, procedures, potential risks, and benefits. Confidentiality was maintained by anonymising participant data and securely storing records. Participants were informed of their right to withdraw from the study at any time without consequence (World Medical Association, 2013).

RESULTS

Caesarean Section Frequency

Figure 1 illustrates the overall frequency of caesarean sections at Isiro General Referral Hospital in Haut-Uélé Province, Democratic Republic of the Congo.

Figure 1:
Overall Frequency of Caesarean Sections at Isiro General Referral Hospital



From May to July 2024, the overall caesarean section frequency was 50%, with 56 caesarean sections out of 112 deliveries. Monthly frequencies were 51% in May, 50% in June, and 49% in July. These figures significantly exceed the World Health Organization (WHO) recommendation of 10–15%, suggesting a potential overuse of caesarean sections or a high prevalence of obstetric complications (Piroozi et al., 2024). Addressing this high rate requires an analysis of medical criteria, infrastructure, and strategies to promote safe natural deliveries.

Socio-Demographic Characteristics of Participants

Table 1 presents the socio-demographic characteristics of the study participants.

Table 1:
Socio-Demographic Characteristics of Participants

Variable	Modality	Frequency (56)	Percentage (%)
Civil status	Single	24	42.9
	Married	32	57.1
Education level	None	8	14.3
	Primary	31	55.4
	Secondary	13	23.2
	University	4	7.1
Profession	Tradeswoman	6	10.7
	Farmer	12	21.4
	Student	22	39.3
	State	6	10.7
	Housewife	10	17.9

Most participants were married (57.1%) and had primary-level education (55.4%), which may limit awareness of health risks associated with caesarean sections. Professionally, students formed the largest group (39.3%), followed by farmers (21.4%). Additionally, 67.9% resided in Isiro town, providing better healthcare access than rural areas (32.1%). These characteristics may influence women's expectations and access to quality healthcare. Tailored awareness programmes focusing on education and accessibility are crucial.

Obstetrical Characteristics of Participants

Table 2 details the obstetrical characteristics of the participants.

Table 2:
Obstetrical Characteristics of Participants

Characteristic	N	Minimum	Maximum	Mean ± SD
Age (years)	56	16	42	27.57 ± 7.316
Parity	56	1	9	3.66 ± 1.984
Number of C-sections	56	1	5	1.93 ± 1.204

The average age was 27.57 years, with a standard deviation of 7.316, indicating diverse maternity experiences. Parity ranged from 1 to 9 (mean: 3.66 ± 1.984), while caesarean sections ranged from 1 to 5 (mean: 1.93 ± 1.204). These factors could influence women's perceptions of care, underscoring the need to consider individual obstetric histories in health interventions.

Caesarean Section-Related Characteristics

Table 3 highlights caesarean section-related characteristics.

Table 3:
Caesarean Section-Related Characteristics

Number of C-sections	Frequency	Percentage (%)
1	29	51.8
2	12	21.4
3	8	14.3
4	4	7.1
5	3	5.4
Outcome		
Good	53	94.6
Poor	3	5.4

Most participants (51.8%) underwent a single caesarean section. A favourable post-operative outcome was reported by 94.6%, with 5.4% experiencing complications. These findings suggest a generally positive caesarean section experience but highlight the need for enhanced care and follow-up for women with multiple caesarean sections.

https://dx.doi.org/10.4314/orapj.v5i6.59

Diagnostic and Consent-Related Characteristics

Table 4 outlines characteristics related to informed consent and family perceptions.

Table 4:
Diagnostic and Consent-Related Characteristics

Variable	Modality	Frequency	Percentage (%)
Informed consent	No	48	85.7
	Yes	8	14.3
C-section communicator	Doctor	9	16.1
	Family member	17	30.4
	Midwife	30	53.6
Family perception	Life-saving intervention	32	57.1
	Lack of confidence	3	5.4
	Economic loss	10	17.9

The results concerning informed consent show that 85.7% of participants did not provide informed consent for the caesarean section, while only 14.3% did. raising ethical concerns about autonomy (Piroozi et al., 2024). Regarding the communicators of the intervention, the majority of women (53.6%) received information about the caesarean section from midwives, followed by family members (30.4%) and doctors (16.1%). As for the family's perception of caesarean sections, 57.1% of respondents viewed the procedure as life-saving, while 5.4% expressed a lack of confidence in the medical team, 12.5% regarded it as a curse, 7.1% mentioned bad family memories, and 17.9% identified economic loss linked to the caesarean section. Additionally, 62.5% of participants reported no negative experiences, while 37.5% indicated they had encountered negative experiences. These findings underscore the importance of communication and information in decision-making about caesarean sections. The low rate of informed consent raises ethical concerns about patient autonomy and involvement in the decision-making process. Furthermore, while the majority of women have a positive perception of caesarean sections, the substantial number of negative experiences emphasises the need to enhance the support and information provided to women and their families throughout the care process.

Table 5 presents the socio-economic and environmental characteristics of the participants.

Table 5:
Socio-economic and environmental characteristics

Variables	Modality	Frequency	Percentage (%)
Income level	Poor	21	37.5
	Average	18	32.1
	Satisfactory	17	30.4
Person responsible for costs	Other people	16	28.6
	Self	12	21.4
	Employer	3	5.4
	Family	8	14.3
	Husband	17	30.4
Environment	Lots of mosquitoes	2	3.6
	Unbearable sanitation	18	32.1
	Unhealthy	18	32.1
	Clean	7	12.5
	Tolerable	11	19.6
Care environment	Well equipped	25	44.6
	Aged linen	6	10.7
	Bedding not modern	7	12.5
	Not enough	4	7.1
	No blood bank	14	25.0

Analysis of income levels revealed that 37.5% of participants considered their income to be poor, 32.1% average, and 30.4% satisfactory. Regarding the person responsible for costs, 30.4% of participants were supported by their husbands, while 28.6% relied on others, 21.4% paid for the procedure themselves, 14.3% relied on family support, and only 5.4% were supported by their employers. In terms of environmental conditions, 32.1% reported unbearable sanitation, 32.1% described the environment as unhealthy, 19.6% considered it tolerable, 12.5% deemed it clean, and 3.6% reported high mosquito presence. Regarding the care environment, 44.6% of participants stated that the facility was well-equipped, 25% reported the absence of a blood bank, 12.5% noted non-modern bedding, 10.7% reported aged linen, and 7.1% described inadequate equipment. These findings highlight the significant impact of income level, environmental conditions, and facility resources on access to quality care. Addressing financial instability and poor environmental conditions is critical to improving the care experience and outcomes for women undergoing caesarean sections.

Table 6 illustrates the factors associated with negative experiences of caesarean sections.

Table 6:
Factors contributing to a negative experience

Variables	Modalities	Frequency	Percentage (%)
Diagnostic communication	Yes	31	55.4
	No	25	44.6
How caesarean was announced	With empathy	35	62.5
	Without empathy	21	37.5
Perception by the family	Good	30	53.6
	Poor	26	46.4
Unhealthy environment	Yes	38	67.9
	No	18	32.1

An analysis of communication and perception factors among participants revealed that 55.4% received positive diagnostic communication, whereas 44.6% did not. The method of announcing a caesarean section significantly influenced experiences, with 62.5% receiving empathetic communication, while 37.5% reported a lack of empathy. Family perception played a role, with 53.6% of participants reporting positive family support, compared to 46.4% with negative family support. Moreover, 67.9% described their environment as unhealthy, whereas 32.1% perceived it positively. These findings highlight the critical role of empathic communication, family perceptions, and environmental factors in shaping caesarean experiences.

Table 7 provides the bivariate analysis results of factors linked to negative caesarean section experiences.

Table 7:
Bivariate analysis of factors associated with negative caesarean section experiences

Factors	Modalities	Negative Experience	χ^2	p	95% CI
		No (35) %	*Yes (21) %*		
Diagnostic communication	No	11 (44.0)	14 (56.0)	6.559	0.010
	Yes	24 (77.4)	7 (22.6)		
Way of communication	With empathy	30 (85.7)	5 (14.3)	21.460	0.000
	Without empathy	5 (14.3)	16 (76.2)		
Family perception	Good	25 (83.3)	5 (16.7)	11.966	0.001
	Poor	10 (38.5)	16 (61.5)		
Unhealthy environment	Yes	23 (60.5)	15 (39.5)	0.196	0.048
	No	12 (66.7)	6 (33.3)		

Bivariate analysis showed significant associations between several variables and negative experiences. For diagnostic communication, 56% of patients with negative experiences did not receive adequate communication ($\chi^2 = 6.559$, $p = 0.010$). Similarly, a lack of empathy in communication was associated with higher negative experiences (76.2%), compared to 14.3% among those who received empathic announcements ($\chi^2 = 21.460$, $p < 0.001$). Positive family perception correlated with fewer negative experiences, as only 16.7% reported a negative experience compared to 61.5% with poor family perceptions ($\chi^2 = 11.966$, $p = 0.001$). However, environmental factors did not show a significant association with negative experiences ($\chi^2 = 0.196$, $p = 0.048$).

Table 8 presents a logistic regression analysis of factors influencing perceptions of negative caesarean section experiences.

Table 8:
Multivariate analysis of factors influencing perceptions of negative caesarean section experiences

Variables	Modalities	Frequency	B	S.E.	Wald	ddl	p	OR	IC 95% EXP(B)
Communication	Yes	31	1.273	0.796	2.554	1	1.000		
	Non	25					0.110	3.571	[0.750-17.010]
Communication style	With Empathy	35	2.661	0.789	11.37	1	1.000	14.31	[3.049-67.177]
	No empathy	21			7		0.001	1	
Family perception	Good	30				1	1.000		
	Poor	26	1.532	0.773	3.922		0.048	4.626	[1.016-1.016]
Unhealthy environment	Yes	38				1	1.000		
	No	18	-0.862	0.872	0.978		0.323	0.422	[0.076-2.332]

Logistic regression highlighted communication style and family perception as significant factors. Patients informed without empathy showed a significantly higher likelihood of negative experiences (OR = 14.311, $p < 0.001$). Positive family perceptions reduced the likelihood of negative experiences (OR = 4.626, $p = 0.048$). Communication adequacy (OR = 3.571, $p = 0.110$) and unhealthy environments (OR = 0.422, $p = 0.323$) did not show statistical significance.

The training of midwives in Isiro significantly improved perceptions of caesarean sections (Table 9).

Table 9 shows the perceptions and experiences of caesarean sections before and after midwives' training in Isiro.

Table 9:
Distribution of participants according to their perceptions and experience of caesarean sections

Variables	Before training		After training	
	Frequency (n=17)	*Percentage (%)*	*Frequency (n=56)*	*Percentage (%)*
Saving intervention	3	17	27	48
Bad fate	4	23	7	12.5
Economic loss	4	23	7	12.5
No total confidence in the team	6	35	2	3.5
Doorway to death	5	29	13	23.5
Unhealthy environment	11	64	48	85
No communication of diagnosis before the operation	11	64	32	57
No prior free and informed consent	15	88	51	91
Fear of death	3	17	4	7
Panic	6	35	3	5

A comparative analysis of perceptions before and after training reveals a significant change in the variables related to the perception of caesarean sections. Before the training, a high proportion of participants considered the surgery a life-saving procedure (17%), whereas, after the training, this belief increased significantly to 48%. The belief in bad luck and economic loss decreased from 23% before training to 12.5% afterward. The lack of complete trust in the medical team, which was 35% before the training, dropped to 3.5%, highlighting a positive impact of the training on patient confidence. However, the

perception of a caesarean section as a "door to death" decreased slightly from 29% to 23.5%. The perception of an unhealthy environment, initially reported by 64% of participants before the training, increased to 85% afterward, which may reflect an increased awareness of environmental conditions. The communication of diagnosis before the operation showed a decrease in the perception of its absence, from 64% to 57%. Free, prior, and informed consent remained high, reaching 91% after the training. Fears of death and panic also decreased, with 7% and 5%, respectively, after training, compared to 17% and 35% before. These results highlight the importance of training in improving patient understanding and confidence, while also pointing to areas that still require improvement, particularly in environmental perception and communication.

DISCUSSION

The study on the frequency and factors influencing negative caesarean section experiences at the Isiro General Referral Hospital (HGRI) reveals several key insights that contextualize the findings in resource-limited settings. One of the most striking results is the high frequency of caesarean sections at HGRI, which reaches 50%, well above the World Health Organization's recommended 10-15% threshold (Piroozi et al., 2024). This is largely due to referrals from other healthcare facilities for complicated cases of dystocia requiring caesarean delivery. While some countries, particularly in Europe and Latin America, have much higher caesarean section rates, this study aligns with findings from similar resource-constrained settings where high rates of caesarean sections are often attributed to delays in seeking care or complications in labour (Perner et al., 2022). Sociodemographically, women aged 16-25 made up the largest group of caesarean cases, a finding that echoes similar studies in rural areas (Mamadou, 2020), which indicate that younger women are more likely to undergo the procedure. Furthermore, the study highlighted the financial burden of caesarean sections, with 70% of participants citing cost concerns, a result consistent with research from Bangladesh (Khan, 2012) and Senegal (Ndiaye & Ayad, 2011). The lack of adequate medical coverage in these regions exacerbates this issue, underscoring the need for policies that make caesarean sections free or affordable for all women (Boatin et al., 2021).

The factors contributing to negative experiences, such as inadequate communication and poor family perceptions, were found to significantly impact patients' psychological well-being, which has been supported by social and psychological theories of health behaviour. For instance, family perceptions of caesarean sections can increase patient anxiety, particularly in culturally sensitive settings like Haut Uélé, where childbirth is often surrounded by deeply ingrained beliefs and fears. Studies in similar environments have shown that family members can either alleviate or heighten anxiety depending on their attitudes toward medical interventions, making their role crucial in shaping the patient's experience (Bosse et al., 2012). Moreover, the study found that communication without empathy increased the likelihood of a negative experience, with poor communication cited as a major factor in over 60% of cases. These results align with findings from similar low-resource settings, where the absence of clear, compassionate communication is a key driver of poor patient outcomes (Faye Dieme, 2012).

However, several limitations must be acknowledged in this study, including the sample size, the reliance on self-reported data, and the absence of a control group. These limitations highlight the need for future research to adopt longitudinal or qualitative methods to gain a deeper understanding of the factors influencing caesarean section experiences. Interventions based on these findings could include regular training workshops for healthcare workers on empathy and communication, as well as collaboration with local NGOs to improve the physical conditions of hospitals. Furthermore, addressing structural issues such as staff shortages and inadequate funding for healthcare facilities is essential to improving patient experiences. Ensuring that midwives and other healthcare workers receive training in active listening, empathy, and communication could play a key role in reducing negative experiences and improving overall satisfaction with caesarean deliveries in resource-limited settings.

In Haut Uélé, inadequate communication was identified as a significant factor contributing to negative caesarean section experiences, as poor communication can heighten patient anxiety and reduce trust in healthcare providers. This issue is compounded by cultural and environmental factors, such as linguistic diversity and varying levels of

health literacy, which can exacerbate misunderstandings between patients and providers. Studies from similar low-resource settings have shown that clear and empathetic communication during surgical procedures can improve patient satisfaction and perceived care quality (Milcent & Zbiri, 2018; Binyaruka & Mori, 2021; Sharkiya, 2023; Campos et al., 2024). In particular, empathy in communication emerged as a key determinant of positive caesarean experiences, as empathetic providers help alleviate emotional distress, thereby enhancing patient trust and satisfaction. Similar studies have highlighted that patients who perceive their healthcare providers as empathetic are more likely to report better outcomes and higher levels of trust in the healthcare system (Nembhard et al., 2023). These findings underscore the need to address cultural beliefs about childbirth and resource limitations in the region, suggesting that culturally sensitive training for healthcare providers and patient-centred communication strategies tailored to local contexts are crucial for improving caesarean experiences in Haut Uélé and similar environments.

CONCLUSION AND RECOMMENDATIONS

This study aimed to assess the frequency of caesarean sections at Isiro General Referral Hospital and analyse factors contributing to negative patient experiences. The findings revealed a concerning caesarean section rate of 50%, well above the World Health Organization's recommended range of 10-15%. The socio-demographic analysis showed that most women affected were aged 16 to 25, resided in Isiro, and had low educational levels, with 69.64% being illiterate or having only a primary education. Additionally, 70% of patients expressed concerns about the financial costs of caesarean sections, highlighting the need to improve access to care. Negative patient experiences were linked to poor communication regarding the C-section announcement and an unhealthy hospital environment.

These findings underscore the importance of targeted interventions, including clinical audits and ongoing healthcare provider training, to enhance patient experiences and outcomes. Further research in diverse regions or urban settings could provide valuable insights into the factors affecting perceptions of caesarean sections, potentially incorporating qualitative methods for richer insights. To address these challenges, systematic policy changes are recommended to improve hospital environments and ensure the availability of critical resources, such as blood banks and modern medical equipment. Implementing these measures will be crucial to optimising caesarean section practices, improving access to care, and safeguarding maternal and child health.

Ethics Approval: Ethical approval was obtained from the Ethics Committee of the Higher Institute of Medical Technologies of Kinshasa (Decision No. 055/ESU/ISTM/DG/2022).

ORCID iDs:

Boya, V. B.[1]: Nil identified
Kangite, J. M.[2]: Nil identified
Mawunu, M.[3]: https://oricid.org/0000-0001-6658-9223
Ngbolua, K. N.[4,5]: https://oricid.org/0000-0002-0066-8153
Tshitadi, A. M.[1]: Nil identified
Omanyondo, M. O.[1]: Nil identified
Mbungu, R. M.[6]: Nil identified

REFERENCES

Betran, A. P., Ye, J., Moller, A. B., Souza, J. P., & Zhang, J. (2021). Trends and projections of caesarean section rates: Global and regional estimates. *BMJ Global Health, 6*(6), e005671. https://doi.org/10.1136/bmjgh-2021-005671

Binyaruka, P., & Mori, A. T. (2021). Economic consequences of caesarean section delivery: Evidence from a household survey in Tanzania. *BMC Health Services Research, 21*, 1367. https://doi.org/10.1186/s12913-021-07386-0

Boatin, D. A., Ngonzi, J., Ganyaglo, G., Mbaye, M., Wylie, B. J., & Diouf, K. (2021). Cesarean delivery in low- and middle-income countries: A review of quality of care metrics and targets for improvement. *Seminars in Fetal and Neonatal Medicine, 26*(1), 101199. https://doi.org/10.1016/j.siny.2021.101199

Bosse, H. M., Schultz, J.-H., Nickel, M., Lutz, T., Möltner, A., Jünger, J., et al. (2012). The effect of using

standardized patients or peer role play on ratings of undergraduate communication training: A randomized controlled trial. *Patient Education and Counseling, 87*(3), 300–306. https://doi.org/10.1016/j.pec.2012.02.014

Campos, C. F. C., Olivo, C. R., Martins, M. de A., & Tempski, P. Z. (2024). Physicians' attention to patients' communication cues can improve patient satisfaction with care and perception of physicians' empathy. *Clinics, 79*, 100377. https://doi.org/10.1016/j.clinsp.2024.100377

Carter, E. D., & Walker, P. N. (2022). Estimating c-section coverage: Assessing method performance and characterizing variations in coverage. *Journal of Global Health, 12*, 08002. https://doi.org/10.7189/jogh.12.08002

Cellule de Planification et de Statistique (CPS/SSDSPF), Institut National de la Statistique (INSTAT/MPATP), INFO-STAT, & ICF International. (2014). *Enquête Démographique et de Santé au Mali 2012-2013*. Rockville, Maryland, USA: CPS, INSTAT, INFO-STAT, et ICF International.

Dumont, A. (2017). Différentes étapes pour la mise en œuvre des audits de décès maternels. *Société des obstétriciens et gynécologues du Canada*. http://sogc.medical.org/cme/alarm_f.asp

Duran, S., & Vural, G. (2023). Problems experienced by mothers in the post-cesarean period: A narrative review. *Iranian Journal of Public Health, 52*(10), 2036-2041. https://doi.org/10.18502/ijph.v52i10.13841

Faye Dieme, M. (2012). *Perception et vécu de la césarienne en milieu africain : Enquête auprès de 280 patientes*. Centre Hospitalier National de Pikine.

Jacques, B. (2017). *Sociologie de l'accouchement*. PUF – Le Monde, collection Partage du savoir.

Khan, R., Blum, L. S., Sultana, M., Bilkis, S., & Koblinsky, M. (2012). An examination of women experiencing obstetric complications requiring emergency care: Perceptions and sociocultural consequences of caesarean sections in Bangladesh. *Journal of Health, Population and Nutrition, 30*(2), 159–171. https://doi.org/10.3329/jhpn.v30i2.11756

Koudnoaga, A. (2015). *Comment améliorer la qualité de la césarienne dans les pays d'Afrique sub-saharienne ? Santé publique et épidémiologie*. Université Pierre et Marie Curie - Paris VI; Université Joseph Ki-Zerbo (Ouagadougou, Burkina Faso). https://doi.org/10.13140/RG.2.1.5062.3444

Liu, Z., Xie, L., Liu, X., Chen, J., Zhou, Y., Zhang, J., Su, H., Yang, Y., Tian, M., Li, J., & Dong, Y. (2023). Cesarean section and the risk of allergic rhinitis in children: A systematic review and meta-analysis. *Scientific Reports, 13*(1), 18361. https://doi.org/10.1038/s41598-023-44932-8

Mamadou, T. (2020). *Le vécu des patientes césarisées : Au centre de santé de référence de la commune II du district de Bamako*. Thèse Fac Méd, Université des Sciences des Techniques et des Tecnologies, Bamako, Mali.

Mbongi, G. (2023). *Ma loi sur la gratuité de soins de la maternité*. Le Harmattan RDC.

Milcent, C., & Zbiri, S. (2018). Prenatal care and socioeconomic status: Effect on cesarean delivery. *Health Economics Review, 8*, 7. https://doi.org/10.1186/s13561-018-0190-x

Ndiaye, S., & Ayad, M. (2011). *Enquête Démographique et de Santé à Indicateurs Multiples au Sénégal (EDSMICS). Rapport, 9*, 138-139.

Nembhard, I. M., David, G., Ezzeddine, I., Betts, D., & Radin, J. (2023). A systematic review of research on empathy in health care. *Health Services Research, 58*(2), 250-263. https://doi.org/10.1111/1475-6773.14016

Perner, M. S., Ortigoza, A., Trotta, A., Yamada, G., Braverman Bronstein, A., Friche, A. A., Alazraqui, M., & Diez Roux, A. V. (2022). Cesarean sections and social inequalities in 305 cities of Latin America. *SSM - Population Health, 19*, 101239. https://doi.org/10.1016/j.ssmph.2022.101239

Piroozi, B., Moradi, G., Khoramipoor, K., Mahmoodi, H., Zandvakili, F., Ebrazeh, A., Shokri, A., & Moradpour, F. (2024). Is the surge in cesarean section rates during the COVID-19 pandemic truly substantiated? *BMC Pregnancy and Childbirth, 24*(1), 275. https://doi.org/10.1186/s12884-024-06492-1

Sharkiya, S. H. (2023). Quality communication can improve patient-centred health outcomes among older patients: A rapid review. *BMC Health Services Research, 23*, 886. https://doi.org/10.1186/s12913-023-09869-8

Shuman, H. L., Grupp, A. M., Robb, L. A., Akers, K. G., Bedi, G., Shah, M. A., Janis, A., Caldart, C. G., Gupta, U., Vaghasia, J. K., Panneerselvam, A., Kazeem, A. O., Amutah-Onukagha, N. N., & Levine, D. L. (2023). Approaches and geographical locations of respectful maternity care research: A scoping review. *PLOS ONE, 18*(8), e0290434. https://doi.org/10.1371/journal.pone.0290434

Sung, S., Mikes, B. A., & Mahdy, H. (2024). Cesarean section. *StatPearls [Internet]*. Treasure Island, FL: StatPearls Publishing. Retrieved October 5, 2024, from https://www.ncbi.nlm.nih.gov/books/NBK546707/

Witter, S. (2024). *La gratuité des accouchements et des césariennes en Afrique de l'Ouest et au Maroc : Résultats et leçons tirées de la recherche*. https://www.abdn.ac.uk/smmsn/documents/femhealth-Overall_FH_PB_French_Lo.pdf

Yaqoub, R. M., Khouj, M. A., Alsaif, A. A., Eissa, G. A., Alhemdi, J. A., & Albasri, S. (2022). Awareness and knowledge of caesarean section complications among women in Jeddah, Saudi Arabia. *Cureus, 14*(12), e32152. https://doi.org/10.7759/cureus.