


Women's mode of birth preferences and preparedness of hospitals to support vaginal birth in the public health sector in Argentina

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Abstract

Background: This paper reports on postpartum women's mode of birth (MOB) preferences across five public maternity hospitals in Argentina, the variables and motives associated with those preferences, and hospital services preparedness.

Methods: A cross-sectional study was conducted with postpartum women aged 15 years or older in geographically diverse public hospitals in Argentina between November 2018 to June 2019. Data on obstetric history, companionship, and MOB preference and motives were collected from mothers using a semistructured interviewer-administered questionnaire. Hospital and participant characteristics, MOB preferences, and perceived advantages and disadvantages were described. Associations between vaginal birth preference, participant characteristics, and hospitals were assessed using odds ratios generated from mixed-effect logistic regression analyses.

Results: The sample included 621 postpartum women, 60% of whom had a vaginal birth. In three of the participating hospitals, most women indicated vaginal birth as their preferred MOB (90%); however, the preference for a vaginal birth was lower in the remaining two hospitals (67%). Differences in preferences across hospitals remained after adjusting by women's age or obstetric history. Cited motives for vaginal birth preference included faster recovery, feeling ready for a vaginal birth, and considering it a more natural process. Preference for a caesarean birth was based on perceptions of increased safety and avoiding pain.

Conclusions: The characteristics of obstetric services revealed they are prepared for obstetric emergencies but have limited resources and support to sustain the process of vaginal birth. Despite the limited support, women giving birth in public maternity hospitals preferred vaginal delivery to a caesarean section. This study could not identify hospital variables associated with women's birth preferences across hospitals.

KEYWORDS

caesarean birth, low–middle income country, public hospitals, vaginal birth, women

Abbreviations: C-section, caesarean section; MOB, mode of birth.

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BACKGROUND

During the past century, childbirth shifted from a natural, domestic experience to a professional, medical procedure. Progress in obstetric technology and medical interventions improved the health and lives of women and children. The introduction of safe caesarean birth was a key step towards an improvement of outcomes during emergency obstetric care.¹ Yet today, the use of the procedure has become controversial due to its unnecessary overuse and the increased risk of short- and long-term comorbidities without a clear benefit on measurable health outcomes.^{2,3}

Caesarean birth rates in Latin America are the highest in the world, accounting for 44% of live births compared to 21% globally.^{4,5} Countries like Ecuador, Brazil, Chile, and Argentina have reported a steady increase in surgical birth rates in recent years.^{6–9} If these trends continue, research suggests that half of the children could be born through caesarean birth in Latin America by 2030.⁵

The World Health Organization (WHO) has recommended women-centred research and care to better understand and address the disproportionate use of caesarean in affected regions.^{5,10,11} Despite this, the voices of Latin American women remain underrepresented in existing research on the mode of birth (MOB) preferences. A recent scoping review gathered data from more than 60 studies and 156 666 women participants to explore women's preferences for caesarean birth, and associated factors and motives.¹² Only 4% (6566) of the study sample was from low- and middle-income countries (LMICs), of which only one study with 368 women was from Latin America.¹³ Fear of pain and/or safety concerns of vaginal delivery were the main reasons for preferring caesarean birth. The review also underscored that there is insufficient information on the availability of essential obstetric services to ensure adequate time, space, and preparation for supporting the vaginal birthing process at the hospital level. These services, often absent in LMICs, are crucial and include trained companionship during labour and birth,¹⁴ antenatal education,¹¹ and availability of pain management interventions.^{11,15} Furthermore, although research has highlighted factors specific to the public sector that may contribute to caesarean birth overuse such as a disconnect between information from prenatal care to delivery,¹⁶ there is no clear evidence that women's preferences diverge while receiving care in the public versus private health sector.¹⁷

As part of a larger formative research project conducted by a multidisciplinary, international research partnership,^{18,19} this study aimed to describe women's MOB preferences and identify the factors associated with those preferences in public hospitals in Argentina. Study findings will be used to inform the design and implementation of women-centred interventions for reducing unnecessary caesarean birth in the Latin American region.

METHODS

A comprehensive description of the study methodology has been published elsewhere.¹⁸ Using a mixed-methods design, the researchers set out to understand postpartum women's preferences and opinions on MOB, and the obstetric preparedness of the hospitals in which they gave birth. Reporting of the methods used and results follow the Strobe standards of reporting cross-sectional surveys.²⁰

Subjects and sampling

As this study aimed to provide insight into the overuse of caesarean birth in the public sector, only public hospitals were included. Hospitals were purposely selected for inclusion if they used the national perinatal information system (SIP-Gestion)²¹ and performed more than 1000 deliveries per year. Of 88 eligible public institutions, 24 were nonrandomly selected to represent the six Argentine regions (i.e., Northwest, Chaco, Mesopotamia, Pampas, Cuyo, and Patagonia). Nineteen hospitals agreed to participate in the study. From these, one hospital per region was purposely selected. The hospital from the Patagonia region ultimately declined to participate and thus five of the six Argentinean regions are represented in the study. The fieldwork was conducted from November 2018 to June 2019, with hospitals entering the study at different time points for a duration of 3 months each. Participating hospitals were recoded as Hospitals A, B, C, D, and E to preserve anonymity. In 2016, the median caesarean birth rate in the 24 eligible hospitals was 37%, ranging between 27% and 52%.²² Public Hospitals in Argentina provide free access to healthcare under an extensive universal coverage. The included regions differ in the proportion of people living below the poverty line; ranging from 45% in the Hospital E province to 18% near Hospital A in 2018.²²

An identical consecutive block sampling selection strategy was applied in each of the five participating hospitals to recruit women who met the following criteria: a) giving birth (vaginal or caesarean birth) at a participating hospital during the study period, b) aged 15 years or older, c) the new-born did not require hospitalisation in the neonatal intensive care unit, and d) informed consent could be obtained. Using each hospital's delivery logbook, one in every four women who gave birth was selected until the end of the 3-month recruitment period or the target of 130 women per hospital was reached, whichever came first. A sample size calculation was conducted to ensure an adequate representation of women with both modes of birth in sample²³ based on an estimated median proportion of caesarean sections (C-sections) of 37% obtained from official statistics.²²

Data collection and tools

Data were collected at both the institutional and individual levels. To describe hospital preparedness to conduct caesarean birth and vaginal birth, representatives from participating hospitals filled in a form containing information on institutional characteristics. The following items/data were requested: availability of emergency caesarean birth services, blood transfusion services, intensive care unit and neonatal intensive care unit, availability of epidural and nonpharmacological pain management interventions such as massage, hot water, hypnosis, accompaniment conditions during labour and delivery, and antenatal education. Hospital heads of service collaborated with the research team in the selection of hospital representatives.

Data were collected from the first of four postpartum women 8 h after delivery. The data-collection instrument, a 28-item interviewer-administered questionnaire, is available in Supporting Information. Questions fell under the following domains: a) reproductive history, b) MOB preference in the absence of pregnancy complications and participant's reasons, c) labour and delivery process (including companionship), d) participant's understanding of the justification for C-section and the advantages and disadvantages of a vaginal birth versus C-section, and e) general opinions on MOB.

Women were approached after birth and invited to participate, and interviews were scheduled with those who consented. Interviewers have experienced professionals specifically trained for this study (i.e., social workers, psychologists, or nurses) who were not members of the obstetrical service to reduce the risk of bias, preserve confidentiality, and provide an enabling environment. The questionnaires were administered orally to ensure ease of participation for recovering postpartum women.²⁴ For open-ended questions, interviewers had access to a list of probable response options preidentified by the research team (Figure 1).

All responses were coded in standard quantitative format, accounting for multiple answers per question.

Responses noted under "Other" were independently coded by two researchers to capture recurring themes not preidentified by the research team. Codes were compared and disagreements were discussed until a consensus was reached. Coded survey data and metadata are available in Supporting Information.

Statistical analysis

In the first step of data analysis, baseline characteristics of participating hospitals were described using data from the institutional forms filled out by hospital representatives. Participant characteristics including age, reproductive history, delivery method, and process were also described. Continuous variables were expressed as mean and standard deviation (SD) or median (interquartile range [IQR]), and categorical variables as frequencies.

A multilevel analysis was conducted to analyse if women's preferences for vaginal birth differed across hospitals, and to respect the hierarchical nature of the data. An exploratory mixed effect logistic regression estimated unadjusted and adjusted odds ratios (AORs) and 95% confidence intervals (CI) adjusted for denominator degrees of freedom. We acknowledge that the odds ratio (OR) may overestimate the relative risk as outcomes are not rare.

The dependent variable, women's mode birth preference, was coded as vaginal birth = 1, no preference or unknown preference or Caesarean birth preference = 0, thus a binomial distribution was assumed. The model to explain differences in preferences across hospitals included two levels of variables. Level 1 variables relating to the mother (i.e., age, maternal obstetric history, and birth mode of the index pregnancy) accounted for random effects and were predetermined by research partnership experts¹⁸ according to factors identified as directly associated with MOB preference in the literature.^{17,25} Level 2 variables (i.e., the hospitals in which birth took place) were considered fixed-effect variables.^{26,27}

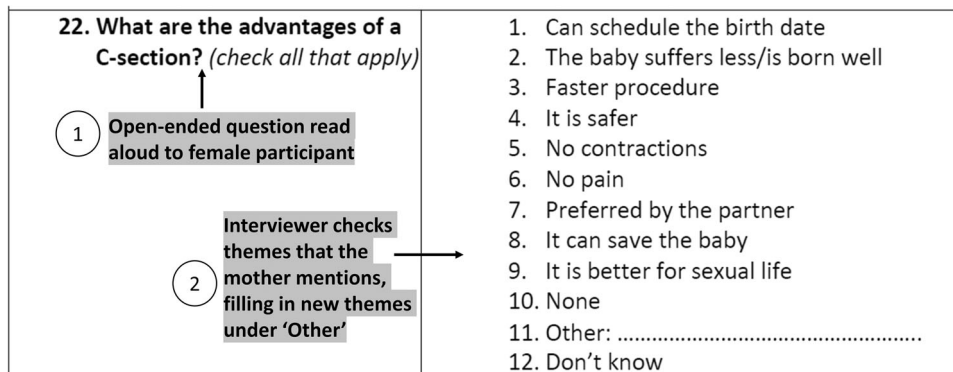


FIGURE 1 Example of question-and-response options from a 28-item questionnaire administered to postpartum women in five public Argentinian hospitals from November 2018 to June 2019. *Note:* Should the participant mention that caesarean birth is faster or safer when asked, "When are the advantages of a caesarean birth?" the interviewer would select, "Faster procedure," and "It is safer" on his or her sheet. Should the participant mention a reason not on the list, the interviewer would note this reason under "Other."

Women's motives for preferring either vaginal or caesarean birth and cited advantages and disadvantages of each MOB, were evaluated using simple descriptive statistics. All statistical tests of hypotheses were two-sided. The statistical analysis was performed using STATA Version 15 (STATA Corp.).

RESULTS

Hospital characteristics and preparedness

Participating hospital characteristics are displayed in Table 1. The number of live births per year ranged from 1100 in Hospital A to 7900 in Hospital C, with a median proportion of births by caesarean birth of 39.5% (29.9 Hospital C %, 45.5% Hospital E). The total number of midwives, obstetricians, and residents working in maternal care per 1000 births ranged from 8.8 to 40.7 and included antenatal, birth, and postnatal care. The number of midwives ranged from 0 to 8 per 1000 live births. The hospital with the lowest caesarean birth rate, Hospital C, had the only model of care involving midwives in the delivery room as well as comprehensive, 24/7 availability for pain management interventions including access to a hot shower and epidural. The remaining four hospitals indicated an obstetrician-led model of care, limited epidural availability; did not routinely offer nonmedical pain management interventions like relaxation and massage; and had limited antenatal education schedules (e.g., one morning per week). Doulas are not available in any hospital facility in Argentina as midwifery is a recognised healthcare profession—although with limited available posts. Only two

hospitals (Hospital A and Hospital C) made provisions (24 h/365 days) for patients to always be attended by chosen companions throughout childbirth. All five hospitals had adequate facilities and human resources in place to provide 24/7 obstetric emergency services including emergency caesarean birth.

Participant characteristics and MOB preference

Women's characteristics by the hospital are described in Table 2. In total, 623 postpartum women were approached and 621 completed the questionnaire after giving written informed consent. This was less than the 650 expected responses as three hospitals reached the end of the 3-month recruitment period before the target of 130 participants was met. Respondents' mean age was 26 (SD 6), though 12.4% (77/621) of participating women were adolescents. The distribution of age groups is provided in the table. The median number of previous pregnancies per woman was 1.2 (IQR: 0–2), and 32.2% (200) were primiparas. Six out of 10 index pregnancies resulted in vaginal births ($N = 355$, 57.1%). Most women who underwent a vaginal birth had a companion of their choice during labour and birth ($N = 314$, 88.5%). For women who underwent a caesarean birth, one-third had a companion of choice ($N = 90$, 34.3%). A preference for either vaginal birth or caesarean birth was indicated by 571 participants. 35 women (5.6%) answered they did not know what their preference was, 14 (2.25%) did not express a preference, and there was one missing value. Vaginal birth was preferred by most women ($N = 467/621$, 75%); however, opinions differed by the hospital. In Hospitals A, C, and D, more than 80% of women preferred

TABLE 1 Characteristics of five participating public hospitals in Argentina at the time of the study

Hospital characteristics	Hospital A	Hospital B	Hospital C	Hospital D	Hospital E
Number of live births per year (2017)	1220	2798	7930	2200	3467
Percent caesarean birth out of hospital live births in 2017 (%)	41.3	37.6	29.2	42.3	45.5
Number of midwives/1000 live births	13.1	0.0	1.6	0.0	7.2
Number of OB/GYNs/1000 live births	16.3	8.5	3.6	6.8	6.6
Number of trainee OB/GYNs/1000 live births	11.4	4.6	3.5	0.0	0.0
Availability of emergency caesarean births Including ICU beds, emergency blood transfusion services, laboratory for blood biochemistry available	Yes	Yes	Yes	Yes	Yes
Access to 24-h epidural	No	No	Yes	No	No
Access to 24-h hot shower facilities during birth	No	No	Yes	No	No
Access 24/7 massage and/or relaxation for pain management	No	No	Yes	No	No
Ample antenatal education options (daily morning or afternoon options)	No	No	Yes	No	No
Access 24/7 to have companionship during vaginal birth	Yes	No	Yes	No	No
Access 24/7 to have companionship during caesarean births	No	No	No	No	No

Note: OB/GYN: Specialist in obstetrics and gynaecology.

Abbreviation: ICU, intensive care unit.

TABLE 2 Characteristics of 621 postpartum women participating in Argentinian hospital: February 2018 to November 2019

Participant characteristics	Total N = 621	Hospital A N = 130	Hospital B N = 127	Hospital C N = 129	Hospital D N = 101	Hospital E N = 134
Age, mean (SD)	26.0 (6)	27.4 (6)	25.4 (6)	26.1 (6)	25.1 (6)	26.0 (6)
No indicated mode of birth preference (does not have a preference, unsure), % (N)	8.1 (50)	0.0 (0)	1.6 (2)	9.3 (12)	11.9 (12)	17.9 (24)
Prefers vaginal birth, % (N)	75.2 (467)	91.5 (119)	68.5 (87)	83.7 (108)	81.2 (82)	52.9 (71)
Parity, median (min, IQ1, IQ3, max)	1.0 (0, 0, 2, 7)	2.0 (0, 1, 2, 6)	1.0 (0, 0, 2, 7)	1.0 (0, 0, 2, 6)	1.0 (0, 0, 2, 6)	1.0 (0, 0, 2, 6)
Primipara, % (N)	32.2 (200)	22.3 (29)	34.6 (44)	31.7 (41)	39.6 (48)	34.3 (46)
Previous caesarean birth, % (N)	27.5 (171)	31.5 (41)	23.6 (30)	24.0 (31)	19.8 (20)	36.6 (49)
Previous miscarriage(s), % (N)	14.8 (92)	34.6 (45)	0.8 (1)	5.4 (7)	17.8 (18)	15.6 (21)
Vaginal delivery in the index pregnancy, % (N)	57.1 (355)	53.1 (69)	58.6 (74)	52.7 (68)	62.4 (64)	59.6 (80)
Caesarean birth in the index pregnancy, % (N)	42.9 (266)	46.9 (61)	41.7 (53)	47.3 (61)	36.6 (37)	40.3 (54)
Of women who had vaginal delivery in the index pregnancy (N = 355)						
Companion of choice present during labour and birth, % (N) ^{a,b}	88.5 (314)	72.5 (50) ³	94.6 (70) ³	88.2 (60) ³	98.4 (63) ³	88.8 (71) ³
Of women who had caesarean delivery in the index pregnancy (N = 266)						
Companion of choice present during labour and birth?, % (N) ^{a,c}	33.8 (90)	72.1 (44)	5.7 (3)	8.2 (5)	86.5 (32)	11.1 (6)

^aPercentage: Total number of women participants that reported being accompanied during birth during vaginal delivery/total number of women who underwent vaginal delivery by the hospital.

^bPercentage: Total number of women participants that reported being accompanied during caesarean delivery/total number of women who underwent caesarean delivery by the hospital.

^cApplies only to low-risk/uncomplicated pregnancies.

vaginal birth, compared to 6% and 53% of Hospitals B and E participants, respectively. Most participants in Hospital B indicated they did not have a preference, or they did not know.

Factors associated with vaginal birth preference

Unadjusted ORs showed that vaginal birth preference was independently associated with having an index pregnancy resulting in vaginal birth (OR: 3.02; 95% CI: 2.02, 4.52) or having previously had a vaginal birth (OR: 1.52; 95% CI: 1.23, 1.89); whereas caesarean birth preference was independently associated with giving birth in Hospital B (OR: 0.42; 95% CI: 0.20, 0.76) or Hospital E (OR: 0.21; 95% CI: 0.12, 0.39) compared to reference Hospital C. Neither age (OR: 1.02; 95% CI: 0.98, 1.05), parity (OR: 1.10; 95% CI: 0.95, 1.10), nor giving birth in Hospital A versus C (OR: 2.10; 95% CI: 0.96, 4.56) was independently associated with birth preference.

Differences in preference across hospitals were explored using generalised mixed-effect regression analysis. Vaginal birth preference remained associated with having an index pregnancy resulting in vaginal birth (AOR 2.47; 95% CI 1.56, 3.92) and giving birth in Hospital A (AOR 2.64; 95% CI 1.16, 6.02). Giving birth in Hospital E (AOR 0.20; 95% CI: 0.11, 0.38) or in Hospital B (AOR 0.39; 95% CI 0.20, 0.73) was associated with a preference for caesarean birth or no preference. However, only a small proportion of the variance was explained by the mixed-effect model (regression results not included in the table).

The motive for MOB preference

To gain a deeper understanding of factors underpinning MOB preference, participants were asked the reasons for their preference. Cited motivations are displayed in Figure 2. Most frequently reported motives for vaginal birth preference were *faster recovery* (263, 56.3%), *less pain after birth*, *less time in the hospital*, and *more autonomy after labour to look after themselves and the newborn* (151, 32.5%), and a *more natural birthing process/feeling ready for a vaginal birth* (137, 29.3%). Women who underwent a caesarean birth but preferred vaginal birth (174, 37.3%) indicated that the surgical procedure resulted in *greater pain after birth/limited ability to walk or move straightaway after birth/longer hospital stay* (152, 32%). The frequency of responses was similar across the five hospitals and age groups.

Common reasons for caesarean birth preference ($N = 104$, 16.7%) included being *safer* ($N = 42$, 40.4%), *not having to go through contractions/not feeling pain during birth* ($N = 32$, 30.7%), *faster procedure* ($N = 20$, 18%), and *having a doctor in charge* ($N = 15$, 14.4%). Safety-related motives (i.e., safer procedure, the doctor in charge) were only cited by Hospital B and E participants, the same institutions with significantly lower rates of vaginal birth

preference. Figure 3 shows that roughly a third of participants did not receive their preferred mode of delivery. Six out of 10 women would like to have been asked their MOB preference ($N = 363$, 58.4%), commenting on *the right of women to choose and have their voice considered and valued* ($N = 242$, 38%).

Perceived advantages and disadvantages of caesarean birth and vaginal birth

Irrespective of preference and index pregnancy delivery mode, postpartum women's perceptions of the general advantages and disadvantages of vaginal birth and caesarean birth were recorded. Cited benefits of vaginal birth included *faster recovery* after birth ($N = 438$, 70%), *more natural* ($N = 311$, 49%), *less pain after birth* ($N = 305$, 48%), *shorter hospital stay* ($N = 272$, 44%), *being able to move right after birth* ($N = 274$, 43%), and the *ability for companion to be present during birth* ($N = 239$, 38%) (Figure 3). The pain was the most frequently mentioned drawback of vaginal birth ($N = 331$, 53%). Conversely, only five participants mentioned perineal tears and examination discomfort relating to the vaginal birth process. A third of the participants cited no disadvantage at all with vaginal birth ($N = 183$, 29.4%).

Cited advantages of caesarean birth included *not feeling pain during birth* ($N = 207$, 33%), *faster procedure* ($N = 194$, 30%), *ability to schedule birth date* ($N = 189$, 29%), *not feeling the contractions* ($N = 181$, 29%), *generally safer* ($N = 119$, 19%), and *safer for the baby in case of obstetrical emergency* ($N = 115$, 18%). Women also noted preserved body appearance, commenting that caesarean birth *does not change your body or cause perineal tears* ($N = 29$, 4%). Notable disadvantages of caesarean birth were the *longer hospital stay* ($N = 503$, 81%) and the post-surgery loss of independence which prevented mothers from *looking after the baby or themselves* ($N = 119$, 19%).

As a final survey question, women were asked which circumstances might necessitate a C-section. The answers tended towards medical justifications, mentioning *mothers with severe or high-risk medical condition* ($N = 345$, 55%), *babies in "seated" position* ($N = 267$, 42%), *misplaced umbilical cord* ($N = 239$, 38%), *overdue birth date* ($N = 201$, 32%), *prolonged labour resulting in exhaustion* ($N = 193$, 31%), and *having had a previous caesarean birth* ($N = 142$, 22%).

DISCUSSION

The public obstetric services included in this study from five Argentinean regions reported an average caesarean delivery rate of 39% which was considered overuse of the procedure by the healthcare providers at the hospitals.¹⁹ Despite the disproportionately high rates of caesarean birth, most postpartum women interviewed in these services indicated a preference for vaginal birth, citing faster recovery time,

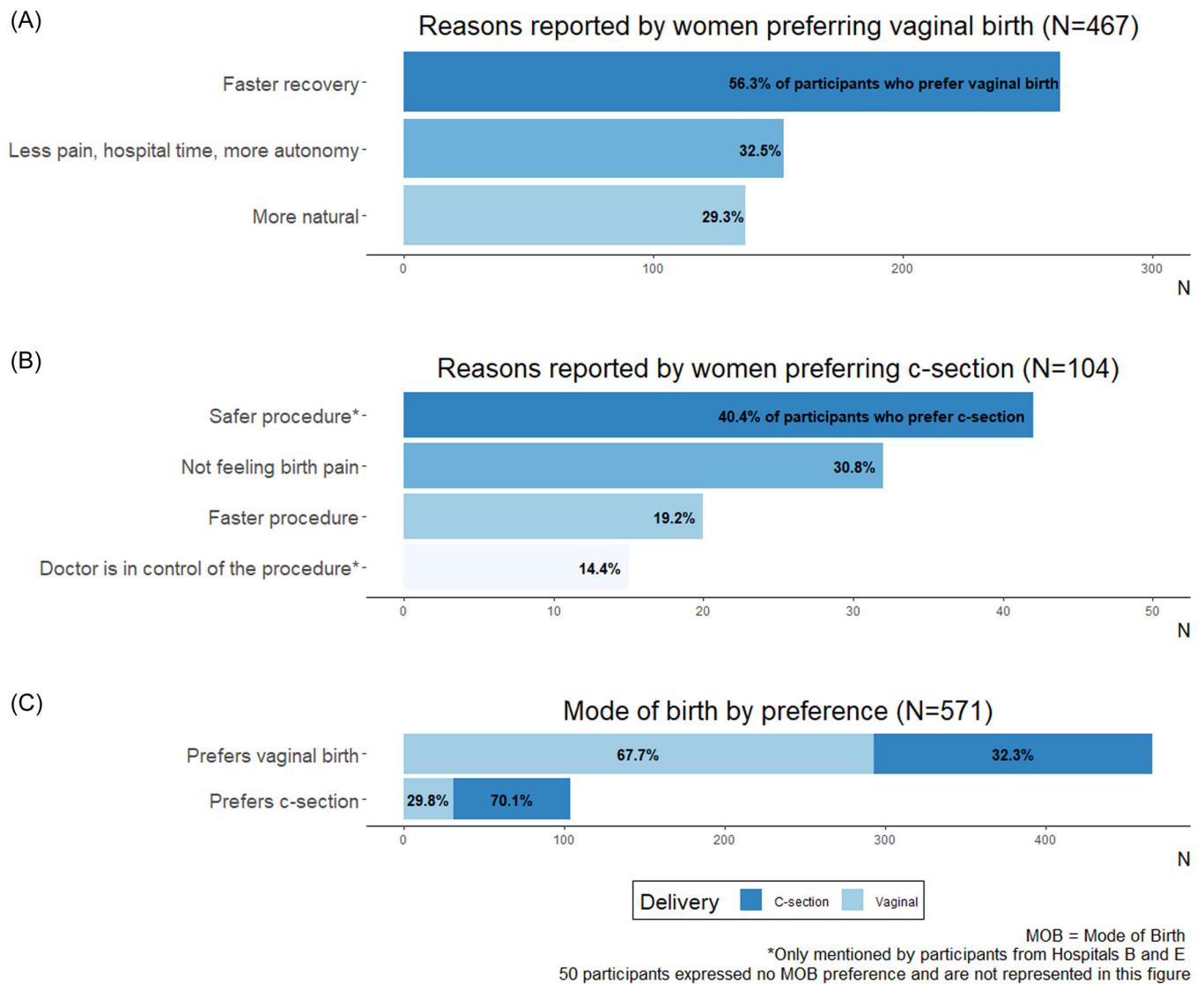


FIGURE 2 Cited reasons for preferring vaginal birth (A) or preferring caesarean birth (B), and the delivery that participants underwent according to their mode of birth preference (C): 571 postpartum women, Argentina, February 2018 to November 2019.

increased postpartum autonomy and ability to care for one's child, and a preference for a natural delivery as primary motives. Women interviewed as part of past studies on MOB preference in Latin America indicated similar preferences and motives for vaginal birth.^{12,13,25} It is significant that women preferred vaginal birth even in a context of high caesarean births and obstetric services that have limited access to antenatal education and pain management strategies, and in services led by obstetricians.

Approximately one-fifth of interviewed women expressed a preference for C-section, a higher proportion than has been cited in other similar studies in the region.^{13,17} Primary disadvantages of vaginal birth and, consequently, advantages of caesarean birth relate to the painful labour and birth process. Women's accounts of pain during and after birth were consistent and repetitive across

all participants regardless of age, mode of the index pregnancy, and delivery history. Fear of pain is also a frequently cited concern by women across countries and regions irrespective of their MOB preference.^{25,28-31}

Deficits in access to essential obstetric services that would be deemed necessary for respectful and women-centred vaginal birth may be playing a role in caesarean birth preference. Four of the five participating Argentinian hospitals reported no access to epidural by request nor availability of hot showers, massage, relaxation, or hypnosis, resulting in suboptimal pain management during labour. Given the consistency of these findings, policymakers, managers, and healthcare teams must address pain management during and after birth as an essential component of obstetric care and unmet needs. Public obstetric services will require national and local governments to allocate adequate hospital resources to accomplish this.

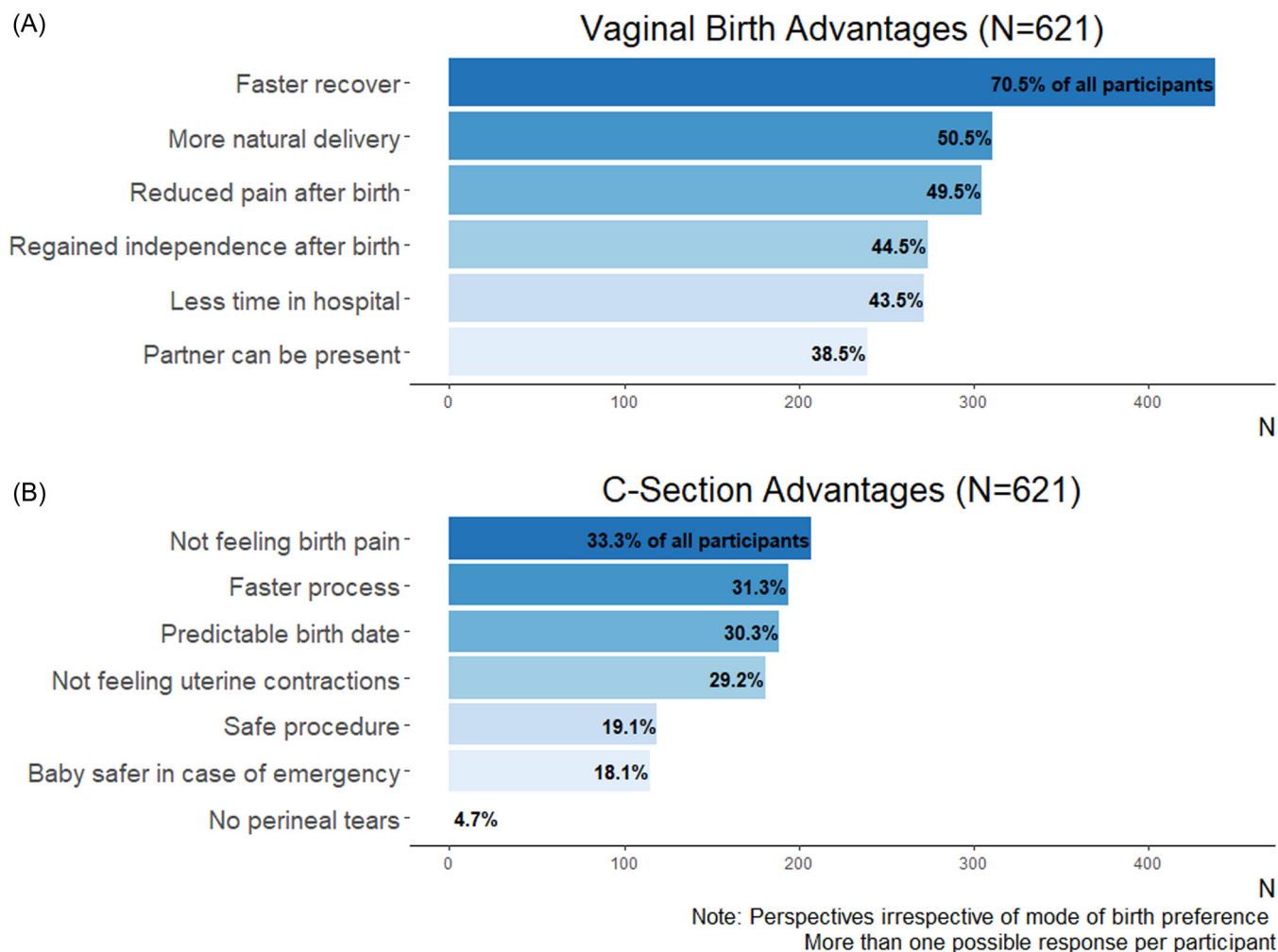


FIGURE 3 Perceived advantages of vaginal birth (A) and caesarean delivery (B) according to 621 postpartum women: Argentina, February 2018 to November 2019.

Misconceptions about caesarean birth safety have been described.^{12,32} In our research, while women who preferred caesarean birth also indicated safety-related motives, this varied by the hospital. Women giving birth in Hospitals B and E mentioned procedure safety and having a doctor in charge of the procedure as motives for caesarean birth preference. The fact that participants from these hospitals were also significantly more likely to prefer caesarean birth underlines the potential role of women's safety concerns as a barrier to optimal caesarean birth use. Consequently, further exploration of factors contributing to a feeling of safety during live birth can help to address this barrier. While our findings revealed the perceived importance of having a doctor present, research shows that a trustful and respectful relationship with an attending midwife, and a sense of support from a companion, can also contribute to a feeling of safety during vaginal delivery.^{14,33}

Our study revealed significant differences in women's MOB preferences across hospitals which are challenging to interpret. The two hospitals in which women were less likely to prefer vaginal birth are located in regions of the country

with similar poverty rates (42% of residents measured incomes in both regions fell below the poverty line in 2018³⁴), but presented different human resource structures (midwives were present on the obstetric team of only one of the two hospitals). Furthermore, these hospitals have similar features to institutions with greater vaginal birth preference, including high caesarean birth rates (>37%), limited availability of pain management, and reduced antenatal education.

The scope of this study prevented us from investigating how women access and choose their birth hospital.

Besides the birth hospital, the other variable associated with MOB preference was vaginal birth of the index pregnancy confirming previous research findings.¹² Previous miscarriages have been described to increase elective caesarean, particularly if the woman is older, seeks care with a private provider or had a surgical pregnancy in their first pregnancy.¹² In our sample, we could not confirm this association.

Irrespective of MOB preference, findings revealed common themes across participant responses. The first is

related to the availability of support services. Most women in this sample indicated they have someone of their choice present during birth, contrasting with the institutional surveys in which only two of five institutions reported making 24-h provisions for companionship during vaginal birth. There are many explanations for this discrepancy: observer bias – hospitals knew that an external researcher would conduct this interview and ensure women had this right enforced; or respondent bias – those completing the institutional survey were biased towards a more negative view of their performance.

Objectively, about 40% of women in this sample indicated that the presence of a partner was a primary advantage to vaginal birth. This draws attention to the barriers women face to receive continuous emotional support and encouragement during birth as recommended by available evidence on improving the birth experience and reducing unnecessary caesarean births as well as the importance for institutions to work towards making companionship during birth always feasible.¹⁴ We did not explore the training or education that companions received to support women during birth; but we did find the limited provision of antenatal education to women. Future interventions should focus on strengthening the preparedness for the birth of women and their companions as in most LMIC the availability of midwives or doulas is limited.

Moreover, women may lack additional support to look after newborns and themselves following childbirth in the hospital. While we did not explicitly investigate obstetric services' provision of support to postpartum women, it is worth noting that a previous study reported that it was not always guaranteed that women could have companionship after birth due to limited space in the hospital facilities.³⁵ In addition, a high proportion of women attending public hospitals in the selected regions come from households with no formal employment or in the lower education quintile.²² Because their partners or extended family may need to attend essential work or look after small children, it is possible that these women are more likely to be on their own during the postpartum period.³⁵ In the context of limited human resources, it is unlikely that in the future public institutions can provide such support following delivery thus providers should consider this factor when choosing a caesarean birth over vaginal birth in cases with no clinical indication.

When asked about the advantages and disadvantages of vaginal birth and caesarean birth, participants focused on short-term consequences. Women's accounts confirmed the immediate drawbacks of caesarean birth use for low-risk pregnancies including difficulties moving and looking after the newborn, and prolonged hospital stays. Yet, as has been noted in previous studies, women rarely mentioned the potential long-term effects of caesarean birth on mother and child.^{31,36,37} Women may face an increased risk of complications during a future pregnancy, sexual dysfunction, or subfertility. Short-term risks to children including altered immune development and reduced

intestinal gut microbiome diversity may increase the risk for late childhood obesity and asthma.² The disconnect between the severity of these consequences and the unawareness among women found in this and similar studies underlines a need for increased information resources and antenatal education provided to women considering caesarean birth for uncomplicated pregnancies.

Finally, our study revealed that three in five women would have liked to be asked about their preferences but were not. This is of particular interest given that the index pregnancy of one-third of participants who expressed a preference for vaginal delivery resulted in caesarean birth. Though surgeries may have been medically indicated, participant's desire to have their opinions heard reinforces the need to establish interventions that include women as active participants in healthcare decisions and enable open communication and informed dialogue between healthcare providers and patients.¹¹

Limitations and strengths of the study

There are some limitations to the study. Notably, this sample represents women from public hospitals in different regions of the country who had an uneventful pregnancy and delivered a healthy newborn. Women with traumatic birth experiences or experiences in the Intensive Care Unit may have different interpretations of their preferences, birth experience, and perceptions of safety. While we wished to further explore how women's preferences related to their actual mode of delivery, the lack of clinical data prevented us from understanding factors contributing to index pregnancy delivery mode. Despite these limitations, this is the first study to consider obstetric services preparedness characteristics and capability for some of the WHO intrapartum care recommendations in the context of MOB preference in Latin America.³⁸

CONCLUSION

This study reinforces the evidence that women in public services in Argentina prefer vaginal birth over caesarean birth even in difficult contexts with inadequate human resources, pain management strategies, antenatal education, and – in some cases – companionship. Women indicated a desire to be asked about their birth preference, calling for obstetric services to incorporate women into the decision-making process during the antenatal period. In some hospitals, the preference for a vaginal birth was lower than in others. Women's obstetric history did not completely explain this variability

A starting point for hospitals should include gathering information on how women shape their preferences and values when facing MOB decisions.^{32,39} There is an urgent need for a care model that allows women to express their own birth preferences. Pregnant women need access to

antenatal care allowing them to discuss pain management options available to them.^{11,14}

AUTHOR CONTRIBUTIONS

Carla Perrotta contributed to the original protocol, funding acquisition, data curation, data analysis, funding acquisition, draft preparation, and writing. Mariana Romero contributed to conceptualisation, fieldwork logistics, project administration, funding acquisition, data coding, and reviewed and edited the manuscript. Yanina Sguassero contributed with methodology, fieldwork preparation, and writing the manuscript. Carolyn Ingram reviewed and edited the manuscript, data visualisation, and provided biostatistics support. Natalia Righetti conducted the fieldwork, transcription, and coding of semistructured interviews. Celina Gialdini contributed to the original protocol, fieldwork, and supervision and training of the interviewers for the fieldwork in four institutions. Ana P. Betrán contributed to the conceptualisation, funding acquisition, investigation, methodology, and review and edition. Silvina Ramos contributed to conceptualisation, funding acquisition, and methodology.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available in the Supporting Information of this article.

ETHICS STATEMENT

Ethical approvals from the following institutions were obtained: the Independent Ethics Committee of Centro Rosarino de Estudios Perinatales and the provincial Ethics Committees and/or the Teaching and Research Committees at each of the selected hospitals pursuant to the requirements in each jurisdiction. It was also approved by the Research Project Review Panel of the United Nations Development Programme/United Nations Fund for Population Activities/United Nations International Children's Emergency Fund/

World Health Organization (WHO)/World Bank Special Programme of Research, Development and Research Training in Human Reproduction at the Department of Sexual and Reproductive Health and Research in WHO, and the WHO Research Ethics Review Committee at WHO, Geneva, Switzerland (Reference Number A65919). In Argentina, the research protocol was registered in the RENIS database (Number IS002316) and the provincial ethical committee of each participating hospital. All study procedures were conducted in accordance with the ethical standards of these research ethics committees and the guidelines and regulations outlined in the Declaration of Helsinki. All participants signed an informed consent form, and anonymity was ensured by not including personal data such as name and date of birth. Participant hospitals were anonymised.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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