Title: It happened with me: A qualitative study exploring women's experiences comparing skin-to-skin caesarean birth with standard caesarean birth

Author names, degrees and affiliations:

Clea A. Machold, BScH, MB, BCh, BAO, MJ, MD[1]

Susan E. O'Rinn, BA[2]

Gillian Ballantyne, BScN, RN, PNC (C)[3]

Jon FR Barrett, MB, BCh, MD, FRCOG, FRCSC[2,4]

[1]Collingwood General and Marine Hospital, Collingwood, Ontario, Canada

[2]Sunnybrook Research Institute, Aubrey and Marla Dan Centre for Women and Babies, Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada

[3]Birthing Unit, Aubrey and Marla Dan Centre for Women and Babies, Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada

[4]Department of Obstetrics and Gynaecology, University of Toronto, Toronto, Ontario, Canada

Corresponding author: Clea Machold, cmachold@gmail.com

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Abstract:

Background: The purpose of this study was to understand how the skin-to-skin caesarean section (SSCS) method is experienced by mothers, and how their experiences of SSCS differed from the standard caesarean section (CS) technique.

Methods: Semi-structured in-depth interviews were conducted with 10 participants from Sunnybrook Health Sciences Centre between 2015 and 2018. The interview transcripts were analyzed using a thematic analysis approach to identify key themes.

Results: Ten women, aged 30-41 years, who delivered a term infant by scheduled SSCS, participated in a telephone interview that took place one to 19 months postpartum. Four central themes emerged from the analysis: support for SSCS, control, connection with infant and logistical considerations, including the role of SSCS in enabling women to be active participants in their delivery and experience a greater sense of control during their birth experiences. Participants remarked that in comparing their SSCS experiences with standard CS techniques, the SSCS method bolstered their confidence during the initial moments of parenthood. This was highlighted both in terms of providing a greater sense of connection and intimacy, as well as enhancing initiation and duration of breastfeeding.

Interpretation: Findings from this study refine and add context to what is already known about SSCS from the literature; that skin-to-skin contact, at a minimum, should be the standard of care whenever safely possible, regardless of delivery method. These results provide a critical perspective, that of mothers, and support the transformation of traditional operating room dynamics to reflect a more patient-centered environment.

Introduction

Skin-to-skin contact (SSC) between mother and infant immediately after birth is globally recognized as an evidence-based best practice[1] that fosters intimate contact during a neurobiological 'sensitive period' implicated in future maternal-infant physiology and behaviour[2]. Recognizing the importance of this crucial time on outcomes for mothers and infants, the World Health Organization (WHO) recommends immediate SSC at the time of birth regardless of delivery method, except when separation is medically necessary[3]. Despite this evidence-based recommendation, mothers and infants are routinely separated at birth, often without medical indications. In Canada, less than 50% of deliveries achieve SSC within the WHO's recommended time frame[4,5].

There is ample evidence supporting immediate SSC after birth. For mothers, SSC is a low-risk, cost-effective intervention that increases initiation, duration and effectiveness of breastfeeding[6-8]. SSC may prevent or reduce the severity of postpartum depression[9,10], shorten delivery time of the placenta[11] and increase responsiveness to infant cues and enhanced bonding[12,13]. For infants, SSC is the ideal environment for transition to the extrauterine world[2,14,15] and, if implemented immediately after birth, enables greater central nervous system control[16], cardio-respiratory stability[2], thermoregulation[17,18] and stress hormone levels[12]. Infants who experience SSC are also easier to soothe during painful procedures[19,20].

In Canada, approximately one-third of births take place in the operating room (OR) via caesarean section (CS)[21] resulting in a push to increase SSC following CS (SSCS)[22-24]. However, SSCS in the OR remains the exception rather than the norm as translating this knowledge into routine practice for scheduled CS births has been

challenging. One concern is contamination of the sterile field and the risk of increased surgical site infections; however, a study of infection rates following SSCS found no increased risks[25] and there are new surgical drapes specifically designed to facilitate SSCS without contaminating the sterile field[26]. In addition, there has been criticism towards referring to major surgery as a "natural" procedure[27]. From the patient's perspective, evidence suggests that SSCS enhances the maternal experience of an uncomplicated CS birth[22,28] by offering a family-centered option that "gives birth back" to mothers and babies[29,30] (in conversation with Jon FR Barrett, MB, BCh, MD, FRCOG, FRCSC, Department of Obstetrics and Gynaecology, University of Toronto and Faculty of Medicine, University of Toronto, December 2014). In addition, well documented barriers, such as the lack of a standardized SSCS protocol[31], nursing staff availability[32], maternal/neonatal instability[33], type of anaesthetic[34], support from anaesthesia[34], clinician education[31] and the challenge of practice and behaviour change in a busy clinical environment[24] have impacted the ability to implement SSCS in the OR.

The purpose of this study was to describe maternal experiences of SSCS and compare standard CS to SSCS.

Methods

Study design and population

We conducted a qualitative phenomenological study[35] using semi-structured interviews to describe and identify common themes from mother's experiences with SSCS. Women were invited to participate if they had a previous planned/unplanned CS

and a scheduled SSCS at a large tertiary care hospital in Toronto, Ontario between 2013 and 2017.

Data collection

Women with low-risk pregnancies and a scheduled CS under spinal or epidural anaesthesia were asked prior to delivery if they would be interested in participating. After delivery, participants were excluded if: there were antenatally diagnosed conditions; they delivered before 37 weeks gestation; they had general anaesthetic; they were unstable at the time of surgery; SSCS was not possible (i.e. infant required resuscitation in the OR); or they declined SSCS. Once eligibility was confirmed, interviews were conducted between one and 19 months postpartum. At the start of each interview, informed consent was obtained verbally and participants completed a brief demographic questionnaire. An interview guide was developed, but each interview necessitated a tailored approach dependent on individual experiences and responses. The interviews were digitally recorded, transcribed with identifying information removed and reviewed for accuracy.

Data analysis

Data was analyzed using Braun & Clark's approach to thematic analysis[36]. First, the research team familiarized themselves with the data by reading and re-reading each transcript and noting preliminary ideas. Second, initial codes were generated from the transcripts using the language of the participants. Third, the research team collated the codes into potential themes and grouped each code into a relevant theme. The generated themes were reviewed in the fourth step. During the fifth step, the themes were refined in the context of the overall narrative. The final step, producing a report, is this manuscript.

While the data collection process was underway, we simultaneously conducted analysis using constant comparison to reassess major themes and allow additional categories to emerge[37]. When preliminary concepts began to repeat and no novel ideas emerged, we determined that data saturation had been reached and stopped data collection[35].

Data validation

Member checking was used to ensure that the themes that emerged from the analysis reflected the broadest range of experiences possible. This was carried out by summarizing the major themes and presenting them back to participants with a request for feedback, clarification and confirmation that their experiences had been adequately conveyed[37].

Ethics approval

This study was approved by the Sunnybrook Health Sciences Centre Research Ethics Board (#449-2014).

Results

Ten (n=10) women who delivered at term with a scheduled SSCS participated (Table 1). The mean age of participants was 36.9 and participants ranged in age from 30-41 years. All interviews took place between one and 19 months postpartum. Ninety per cent of participants were born in Canada and 70% reside in Toronto, Ontario. All participants identified as heterosexual, married and living in a two-parent household. Sixty per cent of participants had a previous emergency CS while 40% had a previous

elective CS. One hundred per cent of participants' partners were present during SSCS and standard CS.

Table 1: Study participant demographics

Characteristic	No. of participants (%) n=10
Age, year	
Mean	36.9
Range	30-41
Country of Birth	
Canada	9 (90%)
Outside Canada	1 (10%)
Current Geographic Location	
Toronto	7 (70%)
Outside Toronto	3 (30%)
Sexual Orientation	
Heterosexual	10 (100%)
Marital Status	
Married	10 (100%)
Household Composition	
2-Parent Household	10 (100%)
Total Number of Children in Household	
Singleton (does not include babies born by SSCS)	13
Set of Twins	1
Employment Status at Time of Interview	
Mother	
Maternity Leave	9 (90%)
Working from Home	1 (10%)
Father	
Employed Full-Time	10 (100%)
Support at home	
Live in Nanny	1 (10%)
Previous C/S Pregnancy	
Elective	4 (40%)
Emergent	6 (60%)
Presence of partner during standard C/S	10 (100%)
Presence of partner during SSCS	10 (100%)
Timing of interview, months postpartum	
Mean	11.2
Range	1-19

Four central themes emerged from the analysis: support for SSCS, control, connection with infant and logistical considerations (Table 2).

Support for SSCS

All women reported feeling supported by their families and health care providers in their decision to pursue SSCS. At the time of their SSCS procedure, they also described feeling supported by the medical team at Sunnybrook. In terms of describing the level of support during SSCS, one woman described that she

> "was able to put [her] hand on [her] baby the whole time and the nurses were holding [the baby] on [her] as well" (M8).

Control

One of the primary themes that emerged was a shifting locus of control with SSCS compared to standard CS delivery. When participants compared their experiences of the two delivery methods, there was a clear sense of empowerment with SSCS; as one woman put it, "It happened *with* me rather than *to* me" (M2). With a standard CS delivery, women experienced their infants being "taken away to the warmer" (M2, M4) or "given" (M2) to them. They remarked that SSCS enabled them to be active members in their delivery, giving them "choice, options and power" (M7) during their first hours of parenting. One woman noted that

> "[she] was part of her [baby's] first breath and [she] was part of her [baby's] first cries. [She] saw it and [she] was part of it and [she] experienced it rather than hearing it and hoping everything was OK but not really knowing" (M1).

This sense of control in their birth experience during SSCS also impacted their sense of self. Almost all of the women revealed they carry a sense of guilt or shame for

having a CS, regardless of the indication for the procedure. Some women stated that societal attitudes about requiring a CS hindered their perception of self as mothers. However, this sense of being a "real mother" (M4) was, in some ways, restored through SSCS; perhaps through their engagement in the procedure by "pushing" (M3) at the moment of delivery, or as they comforted their infant on the OR table, there was a sense of pride in "being the only one" (M9) who could comfort their child. Several women remarked that the concept of identifying as a mother through SSCS was important in bolstering their confidence in the early moments of parenthood.

Connection with infant

A third theme that resonated with many participants was that SSCS enabled maternal connection and intimacy with their infant. Women remarked on the intangible sense of closeness that carried through their first year of mothering their child born via SSCS compared to their previous CS experience where they "didn't get that initial bond with my first child….instant bonding" (M3). In a way, they felt that SSCS replicated the experience of vaginal delivery in which they were still able to get that "special time together" (M10). Several women noted that they felt disappointed in their first CS since they missed out on important, and now lost, moments; "I carried her for 9 months and then, someone else held my baby first" (M2).

The vastly different experience of SSCS versus CS had a significant impact on some of the women in our study who observed that their initial experience with standard CS interfered with their long-term intimacy and connection with their children. Although some women told us that their bonding experience was the same with their children for both delivery methods, most felt that their early moments together contributed uniquely

to their attachment with their children born via SSCS; “I feel differently about this child,” “There is something different about my connection with this child,” “I am the only one who can comfort him, I feel like I protected him in some way by pushing for skin-to-skin” (M9). In nearly every interview, participating women commented on a sense that breastfeeding their infant born via SSCS was “very different” (M3, M6) with many attributing SSCS to improving their confidence in and duration of breastfeeding.

In addition, women found that holding, comforting and touching their infant offered a distraction from the surgical procedure and some noted they felt less physical pain because of that distraction.

In addition to attachment and bonding, many women remarked that they found their infants to be less stressed during SSCS.

Logistics

Finally, women recognized that SSCS required additional resources within an already burdened health care system, and that breaking the sterile field changed standard procedures, which could potentially result in negative outcomes. They acknowledged and appreciated that offering SSCS depended greatly on human resource power and nursing availability, and that these factors could hinder the availability of SSCS for other women. They consistently expressed gratitude for having SSCS available as an alternative option, and repeatedly reiterated that the experience was significantly more enjoyable and that the OR environment was much more welcoming and positive than during their standard CS, “This should be the norm, the standard of care” (M3, M5). Despite the necessary accommodations required for SSCS, one woman remarked that

"the baby didn't cry and everybody's voices were low and it was almost a serene experience…there was no chaos, it was very calm, it was very zen" (M10).

Table 2: Study themes

Theme	Description	Quote
Support for SSCS	Participants were asked about support for the SSCS method by their primary caregiver, the medical team and their family.	"They seemed really positive about it" (M2). "Everybody was extremely positive" (M3).
Control	When participants compared their experiences of the standard CS to SSCS, they described a shifting locus of control with the SSCS method and a clear sense of empowerment with SSCS.	"It felt like everything was right here rather than happening around me" (M1). "I was the one that got to say whether or not it was a boy or a girl this time" (M3). "I felt very connected…even the feeling in the OR made it feel like being part of the birth more rather than isolated from it. I felt like I was in the middle of it" (M1).

Connection with infant	Participants described that SSCS enabled maternal-infant connection and intimacy, an intangible sense of closeness that carried through their first year of mothering and a sort of replication of the experience of a vaginal delivery.	"The connection is so much more immediate. I've never had a vaginal birth because I've had 2 C-sections now and will never have a vaginal birth. But even though I still didn't have a vaginal birth, she was so immediately there that I don't feel like I missed out on that experience" (M1). "Having the feeling of your baby who you spent all this time carrying…and caring for and worrying about and feeling move around is actually there…you feel they feel your heart beat. You feel their heart beat. You feel their every little move and cry. It really is surreal. An unimaginable feeling" (M3). "She was rooting right away. She started nursing right on the operating table. It was a cool experience just letting nature take its course. It was uninterrupted by people intervening" (M4).
Logistical considerations	Participants recognized that SSCS required additional staff in the operating room and that breaking the sterile field changed standard procedures. They consistently expressed gratitude for this option.	"It depends on if we have enough staff" (M8). "Until 10 minutes before I went in for my scheduled C-section I wasn't aware if I could get [skin-to-skin] or not…It was, 'we know you want it we'll do our best to get it'…it was never, 'we know you want it and you will get it'…it was, 'it depends on the staffing but we'll try'" (M9). "It was the most lovely experience ever and I'm so grateful for it. It really was one of the best days of my life. It makes such a huge difference" (M4).

Interpretation

Women who experienced SSCS after a CS without SSC found the experience truly monumental. While not all experiences were the same, predominant themes focused on support for SSCS, more control during their birth experiences, connection and intimacy with their infants and logistical considerations, which were similar to previous studies exploring the role of SSCS that also reported positive outcomes[8,38,39]. These findings refine and add context to the existing SSCS literature by documenting women's experiences in their own words from their perspective. It also reiterates that SSC, at a minimum, should be the standard of care whenever safely possible, regardless of delivery method. In addition, our study highlights how SSCS could be used as an intervention to improve breastfeeding.

This study suggests that there is a desire on behalf of pregnant women, and their partners, to experience SSCS and that institutions and medical teams can support this desire. Delivery via SSCS gives control back to mothers over their birth experience and facilitates natural mothering and infant transition into the extra uterine world. It is also important to note that women recognized the barriers to widespread implementation of SSCS, including additional resources, practice change and a cultural shift in the OR environment through education of stakeholders about the changes to standard protocols, positive reinforcement of staff during implementation and active support from management, which are also important considerations in terms of developing and implementing the SSCS method at other hospitals.

Given that women who deliver via CS report a less satisfactory birth experience, have higher rates of postpartum depression and are more likely to have difficulty breastfeeding

than those who deliver vaginally, this simple addition to standard OR protocols, when appropriate, could help address these discrepancies in outcome[22,30].

Limitations

There are several limitations worth noting. First, 60% of our participants compared SSCS to an emergency CS, due to labour dystocia, cephalopelvic disproportion or maternal or fetal distress, which may impact their comparison due to a very different delivery context and experience.

A second limitation is that mothers who participated in this study had uncomplicated singleton pregnancies with SSCS, which may limit the transferability of these findings given that pregnancy complications are associated with a more traumatic CS experience[38].

Finally, our participants constitute a fairly homogeneous sample (i.e. recruited through a large academic tertiary care centre, close in age; all married; heterosexual; and all from a 2-parent household; therefore, the perspectives of other mothers, such as those from rural settings, were excluded).

Conclusion

This study documents the voices of mothers highlighting the importance of SSCS to them. SSCS has the potential to improve outcomes for mothers, infants and patient satisfaction, and could be made more accessible to women and their families. While widespread implementation does require practice change and a cultural shift in the OR environment, the existing practice change literature demonstrates that such

transformations are possible. In addition, these results provide a critical perspective, that of mothers, and support the transformation of traditional OR dynamics to reflect a more patient-centered environment. Our results suggest that, at a minimum, SSC between a mother and her infant should be the standard of care whenever safely possible regardless of delivery method.

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