

BMJ Open Women's hospital birth experiences in Harar, eastern Ethiopia: a qualitative study using Roy's Adaptation Model

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ABSTRACT

Objective The aim of the study was to explore women's birth in public hospitals in the Harari Region of eastern Ethiopia.

Design An exploratory phenomenological qualitative study design was used.

Setting Two public hospitals (Hiwot Fana Specialized University Hospital and Jugal General Hospital).

Participants and methods The study enrolled women who gave birth at the selected hospitals through purposive sampling. We conducted in-depth interviews with 38 women who gave birth to singleton, full-term babies via vaginal delivery (47%; n=18) or caesarean section (53%; n=20) with no pregnancy-related complications. Interviews were audio-recorded and transcribed on the spot and the interviews were analysed using a deductive content analysis approach. Data were analysed using the four components of Roy's Adaptation Model (RAM) as a guiding framework of women's experiences: physiological, self-concept, role and function, and interdependence.

Results Various behaviours were identified: under physiological mode, common behaviours identified included labour pain, fatigue, surgical site pain and anaesthesia-related complication. The women's major problems in self-concept mode were concern for future pregnancy, lack of privacy, newborn health status, relationship with healthcare providers and lack of family support. Due to the prolonged hospital stay and surgical site pain, the women who were unable to care for themselves, their newborn babies and their families adapted poorly to role and function mode. Finally, women who had no family support and who got less attention from healthcare providers reported ineffective adaption for interdependence mode.

Conclusions Application of RAM principles could be used to improve care for Ethiopian women, providing an intervention framework that can gauge and respond to interacting factors that can make women vulnerable to negative birth experiences.

INTRODUCTION

Giving birth is potentially (but not always) a joyful event in a woman's life,¹ ideally enhancing a woman's self-confidence and creating attachment to the newborn.² A positive birth experience is generally characterised by a sense of autonomy, choice, access to

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ The theory-driven design using Roy's Adaptation Model (RAM) provided a strong, conceptually defined framework for our analysis.
- ⇒ Some concepts from RAM (eg, stimuli system, adaptation level, innate and acquired coping mechanisms) and other RAM tenets (eg, cognator and regulator mechanisms) were not used because these were based on quantitative assessments (eg, Likert scales).
- ⇒ By focusing on the four modes selected, we comprehensively explored women's birth experiences.
- ⇒ The in-depth interviews were conducted early in the postpartum period (1–2 days after birth), as most of the participants' homes were far from hospital; this meant that follow-up to discern if perceptions changed after women left hospital was not possible.
- ⇒ The timing of the interviews may have decreased recall bias of the birth experience, but also meant that women may not have been able to draw on their entire postpartum experience.

accurate information and feeling respected.³ This experience can be enhanced through positive relationships with health professionals.⁴ Fear, excessive pain, a perceived lack of support, discomfort and unfavourable outcomes characterise a negative birth experience.^{5 6} The 2018 WHO guidelines on intrapartum care recommended that, in addition to safe labour and childbirth, women's psychological and emotional needs be met in order for women to feel safe, comfortable and positive about the childbearing experience.⁷ This is due, in part, to the fact that postpartum maternal emotional well-being is influenced by birth experiences⁸ and poor postpartum mental illness symptoms—often measured as depression—negatively impact health-seeking (eg, child immunisations⁹) and caregiver behaviours (eg, breast feeding¹⁰ and early childhood development (eg, underweight and stunting¹¹)).

According to studies from higher income countries, a positive birth experience results

from family support, the relationship with healthcare providers, maintaining privacy in terms of body exposure and the number of delivery attendants, and the ability to perform as a mother.^{12 13} There are few studies from Africa, but one from Ugandan also showed that improper care, poor communication and compromised privacy contributed to the mothers' negative hospital-based childbirth experiences.¹⁴ This is reportedly a common reason for home delivery in African countries.^{15–18}

Over 70% of Ethiopian women give birth outside of the healthcare system (CSA Ethiopia 2016). Mostly this is explained based on various practical reasons (eg, geographical, economic). Localised reports however tell a very different story, pointing to emotional reasons, and in particular concerns about how healthcare professionals will treat them. A recent qualitative focus group-based study in Northwest Ethiopia discovered that the perception of 'disrespectful treatment' was a major reason many women avoided giving birth in hospitals.¹⁹ Concerns about the low quality of service and a lack of respectful and supportive care were most frequently expressed by women who had previously given birth in hospitals, which was part of the rationale for this study (ie, based on their own experiences). Other focus group-based and interview-based studies similarly suggested that mistreatment by staff is a factor.^{20 21} One study in Bahir Dar, based on surveys of 284 women, also noted that almost half of women reported 'abuse' in their experiences of hospital births.²² In another survey of 379 postpartum women in the Amhara Region, 74% reported 'mistreatment' and 72% noted poor rapport with healthcare professionals in hospitals.²³

The study was designed with a care framework—Roy's Adaptation Model (RAM)—widely used in the field of nursing and used here to organise, theorise, interpret and suggest ways to improve Ethiopian women's hospital-based birth experiences. We selected this model because it is part of the suite of existing models for women-centred care, and thus it provides a means to examine women's experiences and consider how to improve nursing and other supportive care within health facilities. In addition, RAM allows us to identify where and how women's varied birth experiences fail to be 'adaptive'. 'Adaptation' here refers to the successful interaction between a person (the new mother) and contextual stimuli (including hospital staff). To the best of our knowledge, there is no study in the Ethiopian context that explores women's birth experiences based on their mode of birth using RAM. Thus, this qualitative study uses a novel analytical approach to consider Ethiopian women's hospital birth experiences, focusing on women's perceptions of processes around birth that deviate from what they expect as the quality of care.

RAM conceptualises a woman's positive or negative birth experience as the outcome of process, involving care by others. In this model, good nursing must first address the focal stimuli of a medical event (here: the birth experience, whether vaginal or caesarean section

(CS)) but also take into account contextual stimuli. This includes factors such sociodemographic knowledge, relationship with a health provider, the hospital setting, newborn status, the number of caregivers and the experience of health professionals, all of which influence the response to the focal stimulus directly to adaptation. Residual stimuli deal with women's perception or attitude toward mode of birth. The regulator subsystem of RAM, which deals with neurological, chemical and hormonal responses, was not used in this study. Perceptual/information processing, learning, judgement and emotion are all part of the cognator (coping) subsystem. This was represented by the perception of the birth experience, which includes feelings or emotions about labour or perioperative procedures, delivery process and intervention during delivery, and initial contact with the infant.²⁴ A negative birth experience is interpreted as 'inadequate adaptation' in the context of RAM.

Using the RAM, women's responses to stimuli are organised in four main modes of adaptation: physiological, self-concept, role and function, and interdependence. The physiological model encompasses the physical and chemical processes involved in human function. Fatigue, pain, surgical wound, need for sufficient healing period and decreased mobility were considered as the physiological modes in this study. The self-concept group identity mode is the emotional aspect, including feelings about oneself and the perception of others' reactions, whereas the role and function mode deals with social integrity by concentrating on the performance of activities related to the various roles one passes during life.²⁵ For women who gave birth, the role and function was to perform as a mother and a wife after exposure to the stimuli (mode of delivery). The interdependence model emphasises satisfying relationships between the individual and significant others.²⁵ In our case, the interdependence mode included a partner or family support, interaction with health professionals, social support, contact with the newborn and the like.

In this study, we use qualitative data collected during interviews with 38 women following their hospital births to identify how each mode of RAM was experienced; the analysis used those categories as the interpretive framework. The analytical emphasis was on the distinctions of a focal stimulus (vaginal vs CS) and how that differently shaped women's understanding and meaning of their birth experience, using a phenomenological approach that seeks to create a comprehensive, accurate, clear, and articulate description and understanding of a specific human experience or experiential moment.²⁶

METHODS

The methods are built on the Consolidated criteria for Reporting Qualitative research framework, including 32 items divided into three domains: research team and reflexivity, study design, and data analysis and reporting. The checklist aids in reporting essential aspects of the

research team, study methods, study context, findings, analysis and interpretations.

Research team and reflexivity

The research team included Ethiopian national public health professionals, nurses and social scientists with PhD in the aforementioned fields and first-language fluency in the languages used by participants. Academic and researcher are the occupations of all researchers. The interview and analytical teams were all women, each with long-term experience in the study area. Generally, patients were extremely comfortable with the interviewers. Prior to the start of the study, there was no interaction between the researchers and the participants, meaning they had no existing relationships.

Study design and setting

A phenomenological approach using qualitative study design was employed, based on interviews with women who gave birth at two public hospitals in eastern Ethiopia from April to May 2021.

The in-depth interviews were conducted at public hospitals in the Harari Region. There are three government hospitals and one private hospital in the study area. This study was restricted to two public hospitals: Hiwot Fana Specialized University Hospital (HFSUH) and Jugal General Hospital.

HFSUH is one of the oldest hospitals in Harar, established during the Italian occupation (1928–1933). In the recent decades, the hospital has become a teaching facility for health sciences students at Haramaya University. It has a total of 233 beds, with an average of 11 957 admissions per year.²⁷ The maternity unit offers about 5808 deliveries annually and provides 830 caesarean deliveries annually.²⁸ Jugal General Hospital was built in 1957 by King Haile Selassie I in memory of his father. The maternity unit has six prenatal beds, two delivery couches, one newborn resuscitation bed and eight postnatal beds. In this unit, on average, 3000 deliveries are conducted annually.²⁹

Study population and sampling

Our study was based in the Harari Region, Ethiopia, where the birth rate was 20.3 births per 1000 in 2013.³⁰ The average number of children per woman in the region is estimated at four.³¹ Notably, women undergoing vaginal delivery in this study were not offered pain relief, as is typical in most parts of Ethiopia. In addition, the hospital's protocol explicitly prohibits the administration of epidurals to labouring mothers. This is an essential contextual distinction, relative to our analysis, from other studies.^{32 33}

During the study period, approximately 797 women delivered babies in these two hospitals. Early COVID-19 restrictions were in place, so at HFSUH, no family members were allowed to attend the birth. However, at Jugal General Hospital, there were no restrictions on family attendance, so members were typically present. Eligibility criteria for study participants were women who

gave birth at these study hospitals, had no pregnancy-related complications, carried singleton baby to term, delivered vaginally or by CS, and spoke one of the two common local languages. In addition, women with medically severe birth outcomes (eg, stillbirth, preterm or congenital malformation) or who were admitted for more than 1 week (again indicating severe birth or postpartum complications) were excluded. To sample based on the delivery type and potentially significant differences in backgrounds, women were categorised into two groups based on the mode of delivery: vaginal and CS.

Stratified purposeful sampling was then employed to select participants, illustrating the variation in the experiences of these particular subgroups, and facilitate comparisons. Stratified purposeful sampling aims to capture major variations, even if a common thematic core emerges from the analysis.³⁴ It is also helpful for investigating variations in the manifestation of a phenomenon as any key factor associated with the phenomenon changes.³⁵

Recruitment was done at the maternity ward, and study information, including voluntary participation, the study's aim and methods, was explained.

DATA COLLECTION

The majority of the women approached accepted the invitation to participate, but three women declined to participate in the study. We interviewed 18 women who had vaginal deliveries and 20 women who had CS, exceeding the commonly accepted minimum number of 12 interviews needed to reach thematic saturation.³⁶ Taking into account the stratification of women based on the mode of birth, residency and parity, we included 38 women to reach the saturation level.

Interviews took place 1–2 days after the delivery. Interviews continued until subgroup saturation for both vaginal and CS delivery was reached. Saturation involves sampling until no new themes are obtained so that further interviews would yield redundant information.³⁷

The semistructured interview guide was organised around RAM and included open-ended questions related to the four domains of RAM (physiological, self-concept, role and function, and interdependence) (online supplemental material 1). In addition, the interview guide was pretested with five participants at another Haramaya hospital (not included in the study), and the interview guide was revised accordingly to elicit detailed responses relevant to the study objectives.

The trained facilitators conducted in-depth interviews using the semistructured protocol, accompanied by a dedicated note-taker in Amharic or Afan Oromo, per the woman's preference, for 60–90 min. Emphasis was placed on confidentiality to create a comfortable environment for the participants to share more intimate details and provide a comprehensive description of their experiences. Prompts such as 'tell me more', 'what happened next' and 'please elaborate' were consistently used to

elicit more detail. The note-taker additionally recorded observations of the women's non-verbal reactions such as laughter, crying, eye contact, facial expressions, and signs of fear and discomfort, later aligned with the interview transcript.

Data processing and analysis

The audiotapes were transcribed verbatim in Afan Oromo or Amharic and checked the same day as the interviews by the principal investigator. The interviewer and note-taker then translated the transcripts into English. The principal investigator reviewed the translation alongside the contextual notes taken during the interview to represent the context accurately. The translated files were transferred in plain text format to Open Code V.4.02 software and coded independently by two researchers, with the codes compared to make decisions around discrepancies. Because the data collection and analysis were done concurrently, the following interview was conducted after the previous one was completed. The interviewers read the entire text of each interview in English language and created an interpretive summary. These interpretive summaries were inserted into the final products as a personal experience narrative.

A content analysis approach using deductively derived codes was then used to analyse transcripts. Researchers reviewed the data using existing theories and concepts in a deductive approach, and these concepts were often incorporated into the initial codes as domains.^{38 39} Initial codes were generated to identify the data features in line with the research questions, and the consistency of codes between the two coders was checked. After reaching a consensus about coding, the codes were applied to all subsequent transcripts.

The four RAM modes were thus identified as the prominent domains before accessing the data. These codes were systematically applied to the transcripts so that two reviewers tagged all statements relevant to the research question and RAM, and differences were resolved by discussion within the research team. The research team then reviewed all the excerpts tagged under each code and analysed the narrative experiences of each group of women who delivered vaginally or by CS according to RAM, substantiating with quotations.

Data quality control

We checked quality control on an ongoing basis, using the four common criteria of credibility, dependability, conformability and transferability.⁴⁰ To address credibility, the interviewer spent more time building rapport, which aided to get in-depth information and summarise the participants' responses. After finishing the interview and then discussing with peers, both the lead researcher and senior researchers ensure the alignment with the purposes, methods and procedures to achieve persistent observation or identify those characteristics and elements that are most relevant to the problem or issue under study, on which we will focus in detail.⁴⁰ In addition,

we triangulated the participants in terms of educational status, residency and parity to get comprehensive experiences.

Regarding dependability and conformability, the same protocol was applied, and the process was documented; the same interview guide was used for each participant, transcripts were matched with the audio records to confirm the consistency and findings were supported with quotes from transcripts. To ensure transferability, the sampling techniques, inclusion criteria and the main characteristics of the participants were all clearly stated. In addition, field notes and detailed notes on non-verbal reactions of participants during the interview were used to create a thick description that speaks to transferability.

Patient and public involvement

There was no patient or public involvement.

RESULTS

The highest proportions of the 38 participants were in the age range of 15–24 years ($n=18$, 47.3%), married ($n=38$, 100%), Muslim by religion ($n=31$, 81.5%), of Oromo ethnicity ($n=29$, 76.3%), non-literate ($n=20$, 52.6%) and identified their occupations as housewives ($n=27$, 71%) (table 1). Nearly three-quarters ($n=27$, 71%) of women were multiparous, 18.6% ($n=7$) had a previous CS birth and 13% ($n=5$) had a history of stillbirth. The majority ($n=35$, 92%) of the women were referred to the hospital by another health facility (private clinics, district hospitals and health centres) (table 1). For the mode of birth, 47.4% ($n=18$) delivered vaginally and 52.6% ($n=20$) delivered by CS.

The focus of this analysis was RAM adaptation modes. Women's adaptation behaviour differed depending on their characteristics such as parity, educational level and residency. It is also influenced by the mode of delivery. The four adaptive types of RAM are used to categorise the participants' behaviours. Fatigue pain, activity intolerance and anaesthesia effect were the common behaviours identified under the physiological mode. For self-concept mode, loss of self-confidence, the concern for impact on future pregnancy and lack of privacy were the most frequent codes. Self-care and family care deficits were identified under role and function mode. Finally, family support and relation with healthcare providers were tagged under interdependence mode (table 2).

Physiological mode

The physiological mode of the RAM, as noted above, encompasses the physical and chemical processes involved in human function, during and following the birth process, fatigue, pain, surgical wound and decreased mobility as the dominant physiological problems. Adapting to physiological mode was reported as more difficult for women who gave birth via emergency CS because they experienced labour pain as well as pain from the surgical procedure. These women described

Table 1 Sociodemographic and obstetric characteristics of participating mothers who delivered singleton, term infants

Variable		Vaginal delivery (N=18)	Caesarean section (CS) (N=20)	Total (N=38)
Age in years	15–24	10 (55.5%)	8 (40%)	18 (47.4%)
	25–34	7 (38.9%)	5 (25%)	12 (31.6%)
	35–46	1 (5.6%)	7 (35%)	8 (21%)
Residency	Urban	10 (55.6%)	5 (25%)	15 (39.5%)
	Rural	8 (44.4%)	17 (85%)	23 (60.5%)
Marital status	Married	18 (100%)	20 (100%)	38 (100%)
Ethnicity	Oromo	13 (72.2%)	16 (80%)	29 (76.3%)
	Amhara	4 (22.2%)	3 (15%)	7 (18.4%)
	Gurage	1 (5.5%)	1 (5%)	2 (5.3%)
Working outside the home	Employed	4 (22 %)	7 (35%)	11 (29%)
	Housewife	14 (77.8%)	13 (65%)	27 (71%)
Religion	Muslim	17 (94.4%)	14 (70 %)	31 (81.6%)
	Orthodox	1 (5.6%)	4 (20%)	5(13 .2%)
	Protestant	0 (0%)	2 (10%)	2 (5.3%)
Educational level	Non-literate	13 (72.2%)	7 (35%)	20 (52.6%)
	Literate	5 (27.8%)	13 (65%)	18 (47.4%)
Parity	Primiparous	6 (33.3%)	5 (25%)	11 (29%)
	Multiparous	12 (66.7%)	15 (75%)	27 (71%)
History of CS	Yes	2 (1.1%)	5 (25%)	7 (18.4%)
	No	16 (88.9%)	15 (75%)	31 (81.6%)
Previous stillbirth	Yes	1 (5.6%)	4 (20%)	5 (13.2%)
	No	17 (94.4%)	16 (80%)	33 (86.8%)
Previous neonatal death	Yes	2 (11.1%)	0 (0%)	2 (5.3%)
	No	16 (88.9%)	20 (100 %)	36 (94.7%)
Having referral	Yes	17 (94.4%)	18 (90%)	35 (92.1%)
	No	1 (5.6%)	2 (10%)	3 (7.9%)

Data are n (%).

the labour pain as uncontrollable and mentioned the complexities of the CS procedure. Its after-effects include loss of body control, numbness, prolonged lying on the back and feeling chilled, all reported as negative experiences. Besides, the pain around the surgical site is intense and intolerant without anti-pain medication.

I was referred from the health center [to the hospital] after six hours of labor. The labor pain was difficult to describe; the contractions were frequent with pushing down pain, but the baby did not engage. The doctor decided to perform a cesarean section. The feeling in the recovery room after the operation was horrible. I could not turn to the side. I was in excruciating pain all over my body, and to feed the breast for the baby was very difficult. (25-year-old woman, first-time mother, CS delivery)

Some women preferred the elective CS (CS before the onset of labour), and they showed adaptive behaviour to physiological mode. On the other hand, those who

underwent emergency CS had ineffective adaption for this mode. The reasons for choosing elective CS were fear of labour pain, the previous bad experience of vaginal birth and having previous CS.

My previous birth experience was not positive, and I waited for a normal birth for more than 16 hours before giving birth through CS. Not to repeat this bad experience, I would prefer elective CS for my current pregnancy. However, when I compared this birth to the previous one, I felt better because the pain is only from the surgical site, and I did not experience labor pain. (37-year-old woman, multiparous mother, CS delivery)

Most (two of three) women in the urban area who had previously had CS preferred elective CS and were unwilling to try a vaginal birth. However, even those who agreed to try vaginal birth after CS lacked the patience to wait for labour to progress; as a result, they requested CS.

Table 2 Codes and quotes under RAM

RAM	Codes	Example quote
Physiological mode	Fatigue, pain Activity intolerance Anaesthesia effect Surgical site wound Feeling comfort Ability to control the pain	'..... The feeling in the recovery room after the operation was horrible. I could not turn to the side. I was in severe pain, and to feed the breast for the baby was very difficult.' (25-year-old woman)
Self-concept mode	Loss of self-confidence The concern of future pregnancy Lack of privacy New hospital environment Newborn health status Changing the plan in a mode of delivery Perception of childbirth Interaction with health professionals	'... When they told me that I could only be delivered through CS and that this would be my last CS because I had two previous CS. I was saddened, and my blood pressure rose because my husband and his family needed many children, which also encouraged the community and religious leaders...' (34-year-old woman, multiparous mother, CS delivery)
Role and function mode	Self-care, newborn and family care Hospital stay Pain	'... Some women with CS were discharged after three days, but I have been here for five days because I am in treatment. I prefer to return home after delivery, but I had to stay here for five days due to this CS, and I have four children at home who require my attention, and we have spent all of the money we have, so we want to go home.' (35-year-old woman, multiparous mother, CS delivery)
Interdependence mode	Interaction with health professionals The concern for COVID-19 Family support	'... We are at high risk for COVID, but hospital administration is reluctant against COVID prevention. The visitors and health providers did not use COVID protection, the hospital must focus on problem prevention. Imagine if a mother is infected, how many people can be affected at once. As you can see, there are more than eight beds in one room and more than three people on each bed so that you can estimate the scope of the problem.' (25-year-old woman, first-time mother, vaginal delivery)

CS, caesarean section; RAM, Roy's Adaptation Model.

.....I had previous CS, and the midwife counseled me to have a vaginal birth. My family also advised me to try a vaginal birth. I agreed to give birth vaginally, but the pain was too much for me; I couldn't stand the pain and was exhausted, so I requested CS. (30-year-old woman, multiparous mother, CS delivery)

However, the women from the rural area preferred the natural birth mode, even when they initially refused CS when medically indicated with a serious reason.

.....The baby was buttocks down [rather than head down], and they advised me to have a cesarean section, which I refused. We reached an agreement after a lengthy discussion with my family, but I was still hesitant to give birth via CS because it had significant consequences. (26-year-old woman, multiparous mother, CS delivery)

Those women had poor adaptation to physiological mode. Staying for more days at the hospital, surgical

wound and activity intolerance were the main reasons for the negative birth experience

I was very active in doing things during my previous delivery because I had a normal delivery, but now I had CS. I can't move, can't even go to the toilet, and can't breastfeed or care for my baby because of surgical wound pain. (28-year-old woman, multiparous mother, CS delivery)

According to women who gave birth vaginally, labour pain was incomparable, taking their breath away and making them unable to speak. However, the pain was mostly gone soon after birth. But the body became exhausted.

The labor began at night with back pain, and by the middle of the night, it had become severe and uncontrollable. We arrived at the hospital around 2 a.m., but I gave birth around 10 a.m. Oh, the pain was difficult to describe, but I had forgotten everything as soon as I gave birth. I couldn't even speak after giving

birth because I was so exhausted. (24-year-old woman, multiparous mother, vaginal delivery)

This experience varied depending on the characteristics of the women; women from rural areas accepted labour pain as a necessary part of motherhood and controlled the pain with patience. These women agreed on the severity of the pain, but simultaneously accepted it as a natural event awarded by Allah. Every woman should go through this agony; giving birth through elective CS is an attempt to misdirect Allah's work.

Pain and exhaustion in primiparous women, on the other hand, was unexpected and stressful. The first-time women explained that labour pain was worse than anything they could have imagined; it lasted a long time. During the actual delivery, the body becomes numb and exhausted, making pushing the fetus extremely difficult.

It's difficult to describe the pain; I thought I was going to die. When the contraction came, I squeezed the hand of the medical student who was attending me, and he put my hand on the bed and told me to handle the edge of the bed. However, when the contraction came again, I began to squeeze his hand because I couldn't control the pain. Finally, my body became exhausted during the actual birth, and I could not push the baby. I requested an operation, but they refused. I gave birth with their assistance. (22-year-old woman, first-time mother, vaginal delivery)

Self-concept mode

Women in this study did not feel confident nor in control. Almost all (15 of 20) women who delivered by CS, particularly those who gave birth at HFSUH, stated that they were exhausted by being bombarded with frequent and repetitive questions from students in particular. The women stated that procedures like vaginal examinations and catheter insertion were performed in front of many students and staff members without their consent.

Students kept approaching me with the same question. This was tedious because I was in pain and even cried when I was overwhelmed. Furthermore, the examination was performed in front of many students, which was extremely humiliating. If they maintain privacy, the body can relax, and they can do anything they want. (28-year-old woman, multiparous mother, CS delivery)

Adaptive self-concept also depended on having support, unexpected changes to the planned mode of delivery and newborn health.

I assumed I'd be able to give birth naturally. However, the health professional informed me that I would be unable to give birth naturally due to two previous cesarean sections. This was concerning news that raised my blood pressure. (26-year-old woman, multiparous mother, CS delivery)

The labor started at the workplace (at the market), I called my neighbor, and he took me to the hospital. He told them to support me because I have no family. My husband is looking for work in Adama, I have two children, 12 and 4 years old. The delivery time is not long, but I cannot push the baby. I gave birth with the help of the device. The device traumatized the baby's head and was sent to the neonatal intensive care unit [NICU]. I'm scared and concerned about my baby's health. My two children also require my assistance, but I am here because of the baby. I'm anxious and depressed as a result of all of this. (34-year-old woman, multiparous mother, vaginal delivery)

Women from rural areas fared better in terms of adaptation than urban and more educated women. They more readily accepted the conditions, with little or no help from family or healthcare providers. The multiparous women who came from the rural areas and had a forceps delivery explained that one should accept whatever life offers because Allah's will controls everything.

I finished the labor at home. As soon as I arrived at the hospital, they took me to the delivery bed, the baby was in trouble, and they assisted me with the device. However, he did not cry well after the baby was born and injured his head, transferring him to the NICU. But I am not stressed because this is Allah's job; if he belongs to me, he will cure if Allah creates for him, I will get him at heaven. (22-year-old woman, multiparous mother, vaginal delivery)

The perception of childbirth, hospital environment and relationship with the healthcare provider all influenced primiparous women's adaptation to self-concept behaviour.

I was concerned because my friend's birth experience had been traumatic; she had labored for more than 20 hours, and there were rumors about this hospital such as, if you go here, you will be on the doll for students, so I was afraid when I was referred here, but the treatment they provided me disproved the rumors. (28-year-old woman, first-time mother, vaginal delivery)

Women who gave birth naturally had effective self-concept adaptation, whereas those with an emergency CS had poor self-concept adaptation. They explained that childbirth pain is excruciating, but tolerating it helps build self-confidence.

I labored for 15 hours, the contraction pain is severe especially nearest birth, but it went immediately after birth, I'm healthy, and I said yes, I did it. I'm glad I made it through the difficult period. (20-year-old woman, multiparous mother, vaginal delivery)

Women who gave birth by emergency CS, on the other hand, stated that in most cases, CS is indicated when the baby or the mother is in danger, but surgical procedure

introduces additional risks and causes a great deal of anger and stress.

...after 4-hour labor, the doctor advised me to have my baby delivered via Cesarean section because [the baby] was in distress; this was an unwelcome new experience for me. Furthermore, I became anxious and even cried and asked them to tell my husband and family because I feared I would die. So, before the operation, I decided to talk with my family and entrust my children to my family members [for care if do not survive the procedure]. (35-year-old woman, multiparous mother, CS delivery)

Several women find the environment uncomfortable even after giving birth, and remaining in the hospital for several days does not provide comfort.

I don't want to stay here; I want to go home and celebrate my birth with my family because you don't have autonomy. You don't get what you want, and you don't have privacy here. Furthermore, my family suffers alongside me because there is no place for relatives to rest at night here; they slept outside on the ground, so staying here. (22-year-old woman, first-time mother, CS delivery)

Nearly all (13 of 14) Muslim women were dissatisfied with having their children delivered via CS. This was because they believed that having CS in the current pregnancy would affect future pregnancies and limit their ability to have multiple children, resulting in divorce or their husband bringing a second wife into the household. As a result, Muslim women refused CS delivery even when indicated:

... refused CS and told them I'd rather die than give birth through surgery because if I gave birth to my first child via CS, the next would also be via CS, and I can't have more than two children via this mode, so my husband looked for another wife for getting more children. (18-year-old woman, first-time mother, vaginal delivery)

Those who gave birth through CS after receiving reassurance remained concerned about the future. Because their partners and families shared the same concerns, these women were not emotionally supported or reassured by their partners, families or society. This limited number of children due to CS delivery was the primary cause of marital dissatisfaction, loss of self-confidence and lack of trust in the health system.

... When they told me that I could only be delivered through CS and that this would be my last CS because I had two previous CS. I was saddened, and my blood pressure rose because my husband and his family needed many children, which also encouraged the community and religious leaders... (34-year-old woman, multiparous mother, CS delivery)

In contrast, women who gave birth by elective CS—essentially per arranging the mode of delivery—had a positive self-concept, which they convinced themselves of during antenatal care visits.

During my antenatal care visit, I decided on my mode of delivery, and when the time came to deliver, I was not afraid at all. It is common to feel some frustration when entering the operating room, but this dissipates once you communicate with the teams. (28-year-old woman, multiparous mother, CS delivery)

Role and function mode

Role and function mode deals with social integrity by concentrating on activities related to the various roles one passes during life.²⁵ Most central role and function for women who gave birth was to perform as a mother and a wife after delivery. The women delivered via CS report that breast feeding and caring for the baby are difficult due to pressure from the incision site and associated uterine pains. On top of this, first-time women face more significant difficulties because of their lack of experience.

..... I tried to breastfeed when the baby was crying but couldn't, due to the pain at the incision site and a lack of knowledge about treating the baby. Furthermore, the baby couldn't hold to the breast. She tried to hold but couldn't. At the time, she was angry and crying a lot, which made me stressed, so she started bottle-feeding until I recovered from the pain. (24-year-old woman, first-time mother, CS delivery)

In addition, the length of hospital stays influenced adaptation concerning role and function mode for women who gave birth through emergency CS, especially those from rural areas. They clarified that staying in the hospital for several days is not suitable because they have children who need their care at home and are concerned about the financial implications of a prolonged hospital stay. Therefore, many women are not comfortable staying in the hospital for a long time.

... Some women with CS were discharged after three days, but I have been here for five days because I am in treatment. I prefer to return home after delivery, but I had to stay here for five days due to this CS, and I have four children at home who require my attention, and we have spent all of the money we have, so we want to go home. (35-year-old woman, multiparous mother, CS delivery)

Adaptive behaviour to role and function mode was observed in women who gave birth vaginally, and they reported being able to transition into caring for the baby. After delivery, the health provider assisted in helping position the mother and baby for feeding so that once the baby began to suckle at the breast, breast feeding was successful. Some first-time mothers clarified that while meeting their child for the first time was a wonderful

experience, feeding and caring for their infant's extensive needs could be challenging for a while.

Interdependence mode

The interdependence mode emphasises satisfying relationships between the individual and significant others.²⁵ In our case, interdependence mode included partner or family support, interaction with health professionals, social support and contact with the newborn. Due to COVID-19 restrictions, all women who gave birth at HFSUH were distressed that that family access to the labour and maternity ward was limited, so they received no visits following delivery. Particularly for women who gave birth through CS, this meant women were unable to access physical and emotional support they wanted from family.

...I had a difficult time after giving birth; caring for the baby is difficult due to pain in the incision site; I am unable to move, sit, or turn to the side. family support is critical in this situation, but I didn't get this chance. (32-year-old woman, multiparous mother, CS delivery)

Most (18 of 20) women who gave birth at HFSUH appreciated the skill and kindness of their health professionals. However, the number of healthcare workers was limited, especially at night, so women could not receive this critical help from the hospital staff, further complicating their experience. This was when family support was most needed but not available.

No one is allowed to access the delivery and postnatal wards because of COVID-19. It is more challenging to breastfeed or care for the infant, so having someone in the family relieves stress. (23-year-old woman, first-time mother, CS delivery)

The women explained that even getting food and clothes was very difficult, mainly for those who had no mobile phone to coordinate:

...It was not easy to locate health professionals when you needed their services. To get assistance for a problem, you must wait until they return. You wouldn't be able to get meals on time if you didn't have a mobile phone, and you wouldn't be able to change clothes. The phone is your only means of communication with your relatives. (28-year-old woman, multiparous mother, CS delivery)

The women from Jugal General Hospital, on the other hand, had family support. However, some raised the issue of safety, stating that more than three family members could enter the ward for one woman without COVID-19 protection, increasing the risk of infection, and they rather wished that the hospital would have limited visitors or provided better protection.

... We are at high risk for COVID-19, but hospital administration is reluctant against COVID-19

prevention. The visitors and health providers did not use COVID-19 protection; the hospital must focus on problem prevention. Imagine if a mother is infected, how many people can be affected at once. As you can see, there are more than eight beds in one room and more than three people on each bed so that you can estimate the scope of the problem. (25-year-old woman, first-time mother, vaginal delivery)

Some (5 of 38) women from both hospitals explained that refusing advice from the health professionals resulted in verbal and physical abuse:

I had been in labor for 20 hours, and the door of my womb did not open as expected. The doctors advised me to give birth via cesarean section, but I refused, and the health professionals who followed me became irritated and aggressive. I am still resisting the operation; he tried to take me by force, but I screamed and cried, then he hit me with a card and left the room. Finally, other health professionals came to see me, and he confirmed that the baby's head is coming out, so I gave birth vaginally with stitches. (18-year-old woman, first-time mother, vaginal delivery)

Furthermore, some women stated that lack of adequate and timely procedures beginning with admission to postpartum care resulted in poor quality of care for them and their babies, ranging from negligence to severe complications:

... I went to the hospital at night, and the midwife told me to go home because the cervix was not open, then I returned the following day. The midwife told me the same thing again, but this time I did not return home because I had a baby on the way, and my family begged her to help me, but she insulted them. Finally, the baby's head emerged, and other medical personnel escorted me to the delivery bed with dignity. (28-year-old woman, multiparous mother, vaginal delivery)

Some women also explained that the health professionals only care for the woman until she gives birth so that the critical care given post partum is neglected:

I gave birth through vaginal delivery at night, but there was still no health professional who visited us, even though I was in severe pain after birth. My partner went to the delivery unit and told them to check me, but they didn't come. Finally, I was fed up with waiting for them, felt angry, and tried to leave the hospital without permission, and on my way, I felt dizzy and fell, and I went back to my bed with the help of others. (34-year-old woman, multiparous mother, vaginal delivery)

DISCUSSION

Previous studies in Africa suggest women's generally negative perception of hospital birth experiences is a reason they avoid them. In considering these study results and

their implications for maternity care, we focus on two key points: How do women interpret negatively or positively the role of nurses and other birth attendants based on the type of delivery? Furthermore, how does family attendance matter to women's negative perceptions of their own hospital births?

Based on our analysis of four components of RAM—physiological, self-concept, role and function, and interdependence mode—we find that women who gave birth vaginally reported effective physiological adaptation. In contrast, women who gave birth via CS struggled with surgical site pain and after-effects of anaesthesia. Similarly, women who had CS had less adaptation to self-concept, role and function, and interdependence related to anxiety about the surgical procedure, concern about limitations on future pregnancies, inability to care for themselves and their babies, and a lack of family and social support. In addition, these were associated with more negative birth experiences, as identified by women through interviews.

Our findings show that the mode of delivery, health professional and family support, newborn health status, previous experience and changing of a plan in delivery all impact women's birth experience in this Ethiopian case. The labour pain itself was described as a complex phenomenon that resulted in a sense of confidence and accomplishment for women who delivered vaginally. One particular feature of this study context is that vaginal delivery is—by hospital policy—conducted without epidural. However, most women who delivered vaginally (16 of 18) agreed that labour pain is a 'normal' part of the childbirth process, and those who gave birth vaginally thus adapted well. This finding is consistent with other studies that have found a link between the social constructions of vaginal delivery as a signal of positive womanhood for women, and defines it as a normal, natural and preferred mode of delivery. Thus, vaginal delivery appears to be a symbol of womanhood.^{12 18 41} In contrast, the emergency CS was associated with negative feelings, as those women experienced severe labour pain and pain from surgical incision after birth. The women had ineffective adaptation to physiological mode, which resulted in a negative birth experience; this finding was consistent with other studies.^{18 42}

Fear of surgery, a lack of family support and concern about future pregnancies were the primary causes of ineffective adaptation to self-concept. Almost all (13 of 14) Muslim participants mistrusted CS delivery, mainly because it was perceived to inhibit having more children because hospital policy does not allow any woman to have more than three CS deliveries. Other African studies have shown similar results: CS delivery is associated with stress and anxiety due to fear of pain and death and religious and sociocultural concerns related to its long-term and short-term repercussions.^{43–45}

The majority of study participants failed to receive what they perceived as family support, which using RAM was the primary cause of women's ineffective adaptive

behaviour to self-concept, resulting in a negative birth experience. This finding is consistent with other studies that found that women who received adequate healthcare provider and spouse support had a positive childbirth experience.¹³ Adaptive self-concept mode was also influenced by such nursing actions as ensuring privacy and explaining the procedure before the performance. Most (32 of 38) women stated that examinations were done in front of many students, without adequate warning, and so were humiliating. This has been described in other studies as a factor in negative birth experiences.¹²

Concerning role and function mode, giving birth via vaginal delivery increased the women's self-efficacy and enhanced their sense of motherhood. Women who delivered via CS, on the other hand, faced numerous challenges due to pain at the surgical site. They were unable to sit, move or easily breast feed. Those without additional family support struggled most. Furthermore, the longer admission times related to CS were distressing in itself because this cost more and meant women were further burdened by struggling to pay; this finding that the economics of CS are part of the emotional distress it causes is congruent with other studies.^{15–17}

However, in many African hospitals, the family is never permitted to participate in birth experiences. This is one reason that reportedly women choose to give birth at home.^{15–18} In this specific case, we are able to draw on the comparison of two hospitals with different visiting policies to consider how this may matter to women's experiences.

This study revealed that having support from both family and healthcare providers played a significant role in having a positive birth experience. Ineffective interdependence mode was observed more in women who gave birth via CS, particularly those who gave birth at HFSUH, where family entry was more restricted. This finding is congruent with other studies in sub-Saharan countries, which revealed that the participants valued a birthing environment that allows for family support.

A recent meta-synthesis of ethnographic studies of women's fears around childbirth by Wigert and colleagues⁴⁶ included studies from Australia, Iran, Norway, Sweden and the USA. Part of the bitterness and regret after imperfect birth experiences was directed toward birth attendants such as nurses and midwives; by the same token, women's positive experiences based on empathy were also expressed as part of the care from attendants. During labour and delivery, women may be helped by providing proper care, timely information, warmth, encouragement and reassurance.⁴⁷ Our findings echo this general principle: the worst birth experiences were credited to the failings of hospital birth attendants. Some participants reported being verbally and physically abused. Unfortunately, this finding is not unique to our study and is reported elsewhere.⁴⁸ For example, a study in Uganda reported that physical and psychosocial support provided comfort, consolation and encouragement to the mothers, while improper care, poor communication and compromised privacy contributed to the mothers'

negative childbirth experiences.¹⁴ Furthermore, the indication that caring for women post partum is less important now that she is not carrying her child is distressing and aligns with calls for quality, respectful and dignified care for women.⁴⁹

For Ethiopian women interviewed for this study, CS, in particular, worsened all aspects of adaptation during the birth process as defined by the RAM. Thus, applying RAM principles to nursing will most especially benefit Ethiopian women undergoing CS, providing a framework to consider all the interacting factors that make them vulnerable to negative experiences. In addition, the use of such models already recognisable to nurses and other healthcare professionals, bolstered by empirical evidence such as this study that indicates how and why care must be improved, will make a case for change more accessible.

Our study has several strengths but also some limitations. Notably, the theory-driven design using RAM provided a strong, conceptually defined framework for our analysis. However, some concepts from RAM (eg, stimuli system, adaptation level, innate and acquired coping mechanisms) and other RAM tenets (eg, cognator and regulator mechanisms) were not used because these were based in quantitative assessments (eg, Likert scales). But by focusing on the four modes selected, we comprehensively explored women's birth experiences. The in-depth interviews were conducted early in the postpartum period (1–2 days after birth), as most of the participants' homes were far from hospital. This meant that follow-up to discern if perceptions changed after women left hospital was not possible. Additionally, the timing of the interviews may have decreased recall bias of the birth experience, but also meant that women may not have been able to draw on their entire postpartum experience.

CONCLUSION

Women's birth experiences were explored using RAM. Surgical site pain, anaesthesia-related complications, lack of privacy, the concern of future pregnancy, inability to care for self and family, poor family support and receiving less attention from healthcare providers were the most common reasons for ineffective RAM adaption that leads to a negative birth experience. Application of RAM principles could be used to improve care for Ethiopian women, providing an intervention framework that can gauge and respond to interacting factors that can make women vulnerable to negative birth experiences.

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