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‘Two Sides of a Coin’

*Quality of Childbirth Services in Indian Public Health
Facilities, from the Perspectives of Women and their
Care Providers*

PARIDHI JHA



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Abstract

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Background: Skilled birth attendance, usually available by promoting childbirth at health care institutions in low-resource settings, is known to prevent maternal and neonatal morbidity and mortality. While institutional childbirths in India have increased at an exponential rate, the infrastructure, material and manpower resources to support this practice are lagging, raising concerns about the quality of childbirth services.

Methodology: A mixed-method approach was used in this project: in-depth interviews with women ($n=13$); and focus-group-discussions with the care providers ($n=27$) were conducted and analysed using Grounded Theory. A cross-sectional survey ($n=1004$) assessed prevalence of Fear of Birth (FoB) and postnatal depressive symptoms (PND), along with satisfaction with childbirth services among women in the immediate postpartum period.

Results: The system of cashless childbirth provided at the public health facilities, in the women's experiences, came at the hidden cost of them having to make themselves subordinate to the offered services. The prevalence of FoB and PND was 13.1% and 17.1%, respectively, and these were significantly associated ($p < 0.001$). Among women with vaginal births (VB), 41.2% had experienced a perineal wound and 59% of them underwent repair without local anaesthesia. While the majority of the women were satisfied (VB 68.7%; Caesarean births 79.2%) with the services; women having VBs at Community Health Centres (nearly 81%) were more commonly satisfied compared to those at the District Hospitals (nearly 60%) ($p < 0.001$). From the care providers' perspective, maintaining quality of childbirth services was like a balancing act between the realities of low-resource settings with stakeholders' expectations. While the providers remained proud and committed; the challenges often left them fatigued, disillusioned, irritable and sceptical.

Conclusion: There is a need to improve the sensitivity with which childbirth services are being delivered to women coming to public health facilities; as well as towards improving the care providers' work conditions. Suboptimal birth experiences are associated with the women's perinatal mental health and satisfaction, while perpetual work challenges may make the care providers frustrated and/or apathetic. Improving manpower resources could reduce work-stress in care providers and thereby improve childbirth processes.

Keywords: Fear of Birth, Postnatal Depressive Symptoms, Hindi WDEQ, Hindi SMMS, Institutional Childbirth

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For mothers, yours and mine,

&

For Vikas, my husband and best friend

List of Papers

This thesis is based on the following articles, which are referred to in the text by their Roman numerals.

- I Jha P, Christensson K, Svanberg AS, Larsson M, Sharma B, Johansson E. Cashless childbirth, but at a cost: A grounded theory study on quality of intrapartum care in public health facilities in India. *Midwifery*. Elsevier; 2016;39:78-86.
- II Jha P, Larsson M, Christensson K, Svanberg AS. Fear of childbirth and depressive symptoms among postnatal women: A cross-sectional survey from Chhattisgarh, India. *Women and Birth*. 2017; doi: 10.1016/j.wombi.2017.07.003.
- III Jha P, Larsson M, Christensson K, Svanberg AS. Satisfaction with childbirth services provided in public health facilities: Results from a cross-sectional survey among postnatal women from Chhattisgarh, India. (*Accepted Global Health Action*)
- IV Jha P, Christensson K, Svanberg AS, Larsson M, Sharma B, Johansson E. “The balancing act”: Maintaining the quality of childbirth services in low-resource settings- a Grounded Theory study exploring nurse-midwives’ perceptions and experiences of providing services in public health facilities of Chhattisgarh, India. (Submitted)

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Abbreviations

CHC:	Community Health Center
DH:	District Hospital
FRU:	First Referral Unit
GoI:	Government of India
GNM:	General Nursing and Midwifery
JSY:	<i>Janani Suraksha Yojana</i>
MDGs:	Millennium Development Goals
MMR:	Maternal Mortality Ratio
OBC:	Other Backward Castes
PHC:	Primary Health Center
SBA:	Skilled Birth Attendant
SC:	Scheduled Caste
ST:	Scheduled Tribe
Sida:	Swedish International Development Agency
SPSS:	Statistical Package of Social Science
TFR:	Total Fertility Rate

Glossary of Terms

Below poverty line: families earning less than INR 816/- per person per month in rural, and less than INR 1000/- per person per month in urban, sector. As of 2011, 25.7% of rural Indian population and 13.7% of urban Indian population live below the poverty line (1).

Cross-sectional study: A study that examines the relationship between diseases (or other health-related characteristics) and other variables of interest as they exist in a defined population at one particular time (2).

Maternal health: The health of women during pregnancy, labour and childbirth, and the postpartum period (3).

Maternal Mortality Ratio: The ratio of the number of maternal deaths per 100,000 live births (4).

Millennium Development Goals (MDGs): The MDGs were eight time-bound quantified targets set out to address poverty in its many dimensions including improved health, education, and gender equality (5).

National Health Mission: The overarching umbrella of the National Health Mission brings all Government of India schemes and national programmes for universal access of health care, including maternal and newborn health care. The National Rural Health Mission and the National Urban Health Missions are its two sub-missions (6).

Other Backward Castes: The official term used in the constitution of India to describe all historic socially disadvantaged and profession/vocation based castes (7).

Perinatal morbidity: Any disorder in the foetus or the neonate which occurs as a result of adverse influences during pregnancy, or through the treatment of pregnancy and childbirth that manifests itself within the first four weeks of life (3).

Perinatal mortality: The number of stillbirths and neonatal deaths in the first week of life (3).

Scheduled Caste: The collective official designation given to the socially disadvantaged group of people who historically were without a caste in the Hindu culture. The term Scheduled Caste is recognised in the constitution of India (8).

Scheduled Tribe: The collective official designation given to the socially disadvantaged group of people who historically lived in tribes and/or were forest dwellers. The term Scheduled Tribe is recognised in the constitution of India (8).

Target population: The aggregate of women about which the researcher would like to generalise the study findings (9).

Triangulation: A means of addressing qualitative/quantitative differences, which include data, investigator, theoretical and methodological information, unit of analysis and interdisciplinary triangulation (9).

Trustworthiness: The extent to which the results extracted from the empirical data are valid and reliable (9).

Preface

It is said that the stars sometimes align to make something happen. My PhD journey is probably one of those ‘somethings’ in my life. I come from a family of teachers, scientists and philosophers who created a ‘gender-less’ environment for their children to grow in. Gender was literally never in the picture as we grew up, our privileges were not influenced by being male or female; older or younger; and we always had the right to put forth our opinion and ideas in front of others. Also, my family have taught me how to observe, think and – to a great extent – feel.

I started as a nursing student through a practical choice. My awe and respect for my profession blossomed upon witnessing my paediatric clinical supervisor, who demonstrated how compassion and empathy could bring joy and dignity, even to a terminally ill child. As I had worked mainly with women and their babies after my graduation, choosing to do a Masters in Gynaecological Nursing and Midwifery came naturally. Later, upon taking up a teaching position, I realised I did not have the necessary clinical experience, and indeed, a philosophy, to make me a good teacher. Could I really teach anyone to give quality care?

This led to my growing awareness of ‘quality’ as a health care concept. In my search to contribute towards women’s and their neonates’ health, I ended up as the coordinator of an Indo-Swedish collaborative project, “Improving Maternal and Newborn Health by Strengthening Midwifery in India” (MSP), financed by Sida (2010 to 2013). Working on this project also made me realise that quality of care was not only a complex phenomenon, it was a never-ending phenomenon. It was also embedded in a socio-cultural context – especially the gender dynamics – that have an impact on the perceptions and experiences around quality of health care services.

That is how I chanced upon my main research question. What is quality of childbirth care? And do the women and their nurse-midwives mean the same things when they talk about quality of care? This thesis is the collective output of all the answers that my scientific explorations have generated. I hope that the readers find my work interesting and will have some points on which to reflect about what women – care seekers and care providers – have to say about the quality of care they that they have perceived and experienced.

Introduction

Giving birth has been described as a critical transition point in a woman's life (10), an event that is heavily influenced by the dominant cultural and social norms (11). Scientific literature showed that the women need support from their families and societies as they adjust to having a newborn (10,11); and a lack of social support immediately after giving birth could produce stress and other mental health problems, most notably, depression, among postnatal women (12). Empirical data suggested that women place importance on the support that is offered to them by the care providers during pregnancy and the perinatal period (13,14); and also, that they could have further expectations from institutional childbirths.

Women's expectations of institutional childbirth

Studies from high income countries (HIC) showed that having an understanding of health-care-seekers' expectations was known to make the health services more client-centred: maintaining the dignity of the care-seeker, meeting their needs, and maintaining accordance with the socio-cultural norms (15,16). Several studies explored and described women's expectations from the health facilities and the health-care providers, and the most commonly mentioned expectations were: to be offered a safe birth; to be supported in giving birth; and to be supported in establishing a bond with their neonates (13,14).

Studies from HIC; and low- and middle-income countries (LMIC) described that, upon arriving for an institutional childbirth, the women expected pharmacological and/or non-pharmacological relief from labour pain, and expected the services received to be of quality: early and consistent attendance by a care provider during labour, help in establishing childbirth within the labour room, having a healthy newborn, and a continuum of services in the immediate postpartum period (13,17,18). Previous studies also show that being cared for by well-behaved, competent and helpful care providers was universally expected by women (19), and their expectations of services around institutional birth also influenced their experiences of having an institutional childbirth (20).

A review of the available scientific literature from India suggested a shifting motivation for institutional childbirths among women (21–23); motivated

by the conditional cash transfer programme and/or their need to have a ‘fast birth’: to experience lots of pain so that the baby was born quickly (24,25).

Women’s experiences of institutional childbirth

A review study by Bhutta et al. (2015) showed that most of the scientific information on women’s childbirth experiences came from HIC (26). Understanding women’s experiences of giving birth in a health facility is known to improve the psychosocial sensitivity and quality of care around childbirth (26). Studies from HIC and middle-income countries show that non-affirmation of priority expectations – especially in first-time mothers – caused anxiety, depression and stress, and also influenced women’s evaluations of quality of care (27,28).

Scientific evidence from HIC suggested that the women often experienced the reality of the care that they received to be different from what they expected, and that their interactions with health care providers inside the labour rooms were important for the women to adjust to a reality that differed from their expectations (29,30). A quantitative study ($n=482$) by Iida et al. showed that women giving birth in lower-level health care facilities were more likely to experience patient-centred care compared to women at clinics and bigger hospitals (19).

A study by Halfdansson et al. reported that negative birth experiences at the hospitals often became the deciding factor for a subsequent homebirth for many women (31). Similarly, in HIC, experiencing a childbirth for which the women were not psychologically prepared reportedly led to the development of “Fear of Childbirth”, depression, and “Post Traumatic Stress Disorders” and could increase the chances of the women demanding a caesarean birth in the future (30,32–39). The available scientific information on Indian women’s expectations and experiences of having institutional births was negligible: a few qualitative studies suggested that Indian women expected to have a ‘fast childbirth’ and described their experiences of childbirth to be sub-optimal (24,25,40).

Disrespect and abuse associated with childbirth

Disrespectful, neglectful and abusive health services, reported during childbirth, have raised a global concern (41), and have been reported from HIC as well as LMIC (42). Childbirth abuse was reported as a globally known predictor of choosing homebirths for subsequent pregnancies in several previous studies (41–43). As described in previous studies, incidences of disrespect and abuse during childbirth included: non-confidential and non-dignified care, neglect or abandonment while giving birth, physical abuse – pinching, slapping,

conducting penetrative examinations roughly and without consent – and withholding of health services for non-payment of fees or demanding unofficial payments (41–44). Research evidence has suggested that attitudes of hospital-based care providers largely influenced the prevalence of disrespect and abuse during childbirth (43–45). On the other hand, a qualitative study with Ethiopian midwives revealed that they acknowledged imparting the physical and verbal abuse, terming it unintended, and explaining that it resulted from medical necessity (46). Scientific evidence from India showed that women frequently experienced disrespect and abuse: threats, physical abuse, being ignored while in labour, and having to make unofficial payments for essential services that were supposed to be cashless (40,47,48). However, further explorations are warranted to better understand this phenomenon in an Indian context.

Women's satisfaction with childbirth services

Satisfaction with childbirth services is known to have a multi-dimensional nature and, therefore, provides a women-friendly method to improve institutional childbirth services (49). Measuring beneficiaries' satisfaction, is a cost-effective and sensitive indicator of quality of institutional childbirth services (48,50); and has been studied in both HIC and LMIC settings: women who were satisfied with the childbirth services were reported to have better self-esteem and confidence; established a maternal-neonatal bond faster, and were more likely to breastfeed compared to women who were dissatisfied (10,51). Previous studies reported that women who were dissatisfied with their childbirth experiences were more prone to develop FoB and PND, and faced difficulties in breastfeeding and in performing baby and self-care (52,53).

Childbirth processes – providing information and involvement in the decision-making process, such as having a birth plan and being able to follow the birth plan – are known to have more influence on women's satisfaction with childbirth and services, in comparison to the availability of materials and the birthing environment (20,54–56). Having a birth companion, and receiving pain relief and other help from care providers were factors known to enhance women's satisfaction, as did having less physical symptoms in the immediate postpartum period (57–61). Having respectful care providers who were committed to maintaining women's privacy and meeting their needs, was also reported to positively influence women's satisfaction (16,18,41,62).

Previous studies have reported that the mode of childbirth and obstetric history of women affected their satisfaction: multiparous women, and women having vaginal births tended to be more satisfied with childbirth services (20,63). Studies around the globe revealed that the same demographic variables have different associations with women's satisfaction: while some studies

reported that younger women tended to be less satisfied with childbirth services compared to older women (64), another study showed that age had no influence on women's satisfaction with childbirth services (65). The educational level of women has been associated with childbirth satisfaction, both positively and negatively, while other studies reported no association (20,50,65). Further reported known factors that adversely influence women's satisfaction with childbirth services included: being a working woman; having FoB; and/or PND (29,48,66).

Patient satisfaction studies, in general, were reported to have limitations: for example, the available scientific information did not recommend an appropriate time-point to measure satisfaction with childbirth services (54,67), but some studies cautioned that the researchers must factor in the 'halo effect' (the tendency of having more positive feelings towards childbirth-care in the early postpartum period) and the 'ceiling effect' (participants' tendencies to rate services more positively) as latent confounders during the immediate postpartum period (27,65,68–70); these factors should be addressed before interpreting satisfaction-related results.

A recent qualitative study exploring Indian women's satisfaction with childbirth services showed that women were not fully satisfied with the care they had received during childbirth (24). A meta-analysis of recent Indian studies on women's satisfaction showed that the satisfaction had an infrastructural component – cleanliness and adequacy of resources – and a process component, namely the staff's behaviour, respect of women's privacy, and promptness of action (48). However, as of now, the Indian women's satisfaction with childbirth services has limited empirical evidence.

Fear of Childbirth (FoB)

Pregnancy heralds in a time of intense preparation and adaptations to becoming a mother, even before the birth has taken place, and previous studies suggest that it is natural to experience anxiety and apprehension towards one's abilities to be able to give birth and to optimally support a new life (71). Studies by Wijma et al. suggested that the anxiety and apprehension related to pregnancy and childbirth may progress and manifest as the fear of childbirth, an effect that they have classified as primary FoB. Other studies have described FoB as arising from negative experiences around previous childbirth/s, and this effect has been classified as secondary FoB (39,72,73). Some studies have described an effect classified as clinical FoB, where the women experienced fear of such intensity that they became incapable of performing their day-to-day activities; avoided a pregnancy; and started doubting their ability to give birth to such an extent that they needed therapeutic interventions (72,74).

A review of literature from around the globe suggests that FoB is universal, with its global prevalence estimated to be around 20% (30). A European study – carried out in Belgium, Iceland, Denmark, Estonia, Norway and Sweden (BIDENS) – showed that approximately 11% of women had FoB (75), whereas an Australian study revealed that approximately 24% Australian women experienced FoB (30).

Research studies from HIC show that FoB was most commonly experienced in relation to labour pains, the neonate's wellbeing, operative procedures associated with childbirth, and also, with having an institutional childbirth (30,37,76,77). Several studies revealed that women were apprehensive and afraid of having a caesarean section, however, having a fear of pain influenced their acceptance of caesarean section when it was offered in order to avoid the labour pain (77–80). Previous studies also suggest that the women who are afraid of the hospital, or who are afraid of negative experiences with the care providers, may avoid attending at health care facilities for an institutional birth (81). It has been reported that women with FoB find it difficult to cope with childbirth and postpartum adaptations, such as establishing a bond with their neonates (82–84).

A quantitative study ($n=2206$) by Adams et al. (37) showed that FoB could influence the childbirth process and outcomes, such as prolonging the duration of labour; and another study reported that FoB was a risk factor behind perineal tears while giving birth (85). FoB is known to influence the overall mental health of women, due to its association with mental health illnesses requiring medical attention (37,86,87), and FoB is a known predictor of lesser satisfaction with childbirth services and of postpartum depression (88). A review of the literature revealed only one recent study in India that had explored FoB, however, the questionnaire used was locally constructed and no psychometric properties were reported (89). The availability of scientific information on FoB among Indian women is negligible.

Postnatal depression and depressive symptoms (PND)

Postnatal depressive symptoms emerged as a global health concern due to their known adverse influence on women's ability to perform day-to-day life activities; the establishment of mother-neonate bonding; and the growth and cognitive development of their children (90–93). As with any other mental illness, PND was reported to carry its own socio-cultural stigma, to the extent that women who suffered from PND saw it as a weakness and delayed seeking therapeutic help (94,95). Early anthropological and ethnographic studies revealed that PND was rarely seen in countries such as India, China and Kenya; and proposed that PND was predominantly a western phenomenon; however, a feeling of unhappiness among postnatal women was universally observed, irrespective of the cultural differences (96).

A thematic analysis of content obtained from online forums for women with PND revealed that women felt unhappy that they had failed as a mother because they had to rely on medication to cope with having a baby (94). Qualitative studies with women suffering from PND showed that women, across the cultures, tended to ‘silence themselves’ about their suffering, and thus delayed seeking treatment (96).

The global prevalence of PND is reported to be nearly 13% (88,89,91,97); with known predictors, such as pre-experiencing depression (95), having FoB (39,75,88,89), and having poor support from family and care providers in the perinatal period (12,98–100). In countries with son preference, giving birth to a female child was also reported to have an association with PND (101–103). Gender inequity, and unfulfilled expectations of support from the neonate’s father in managing day-to-day activities after childbirth were frequently associated with PND in other studies (96,99,104). Some studies reported an association between negative birth experiences, especially neglect and violence during institutional childbirth, and PND (84,105).

In the past decade, several Indian studies have explored the mental health – namely the prevalence of PND – of women who received institutional childbirth services: studies from south-west India show that depression among the general population of India was common, and probably contributed to the postnatal depression (102,106). The gender and poverty disparities in India were known to contribute to postnatal depression: the burnout syndrome associated with women performing multiple roles in their family and professional lives reportedly mimicked the depressive symptom; these could precipitate depression, or could confound accurate diagnoses (102,107). No study has been undertaken across India – a country with vast socio-cultural and geographical diversity – to determine the prevalence of postnatal depression. However, one study in a small Indian state, Goa, estimated the prevalence of postnatal depression to be 23% among the local population (102).

Midwives as the primary care providers during normal childbirth

Worldwide, several studies have revealed that having educated midwives providing care during childbirth not only maintains normal childbirth outcomes, but also significantly reduces maternal and neonatal mortalities (108–110). Women who received care from a midwife during hospital births experienced better psychosocial support; viewed the upcoming birth with more psychological readiness; received more help in adjusting to becoming a mother; and, had better support during establishing breastfeeding and while bonding with their neonates (111–115). Studies reporting interventions that were planned and implemented by midwives showed successful management

of fear and PND among pregnant and postnatal women worldwide (109,112,116,117), while providing 90% of essential maternal-neonatal care safely and effectively in the perinatal period (118–120). Thus, understanding the midwives' perceptions and experiences of providing institutional child-birth services may help in identifying facilitators, barriers and bottlenecks in quality improvement.

Studies showed that in countries having an independent midwifery cadre, the midwives retained a positive self-role perception; were confident and proud of their profession; and remained optimistic about the scope and practice of midwifery in spite of professional challenges (108,121–123). The commonly mentioned challenges were: working in low-resource settings; having acute shortage of manpower; having vague job descriptions; experiencing workplace mistreatment; and having their professional authority and performances undermined (45,123–125).

The work environment in such cases was usually patriarchal, creating dualism in midwives' decision-making within a hierarchical work environment (126), while affecting their motivation and – consequently – the quality of health services they provided (127,128).

Qualitative studies on the quality of childbirth services describe that the nurse-midwives' assisted the women to bear the labour pain by 'working with pain', or by 'providing medical and non-pharmacological support' (129,130). Other studies reveal that the partograph was inaccurately completed and/or underutilised (reportedly maintained only for 8 to 80% of women giving birth); especially in lower-level public health facilities (131–133).

Midwifery as a profession in India

Several countries – India included – produce professional nurse-midwives through embedding the midwifery education within the nursing education. Some recent studies from India raised concerns regarding the Indian nurse-midwives' competence in providing essential maternal and newborn perinatal care (134,135). A limited number of studies from India explore the nurse-midwives' experiences of childbirth-service provision, usually amidst the low-resource settings of the public health facilities: a qualitative study from Gujarat showed that the midwifery scope of practice was restricted within higher levels of health facilities having defined hierarchical work structure, while working at smaller health facilities meant more independence for the nurse-midwives in treatment and decision making (136).

Qualitative studies from other Indian states showed that the care providers – including the nurse-midwives – worked in chaotic and crowded labour rooms, with acute manpower-infrastructure-material shortage, and were not satisfied with the quality of services they could provide to those in their care (24,47,137,138). Most of the studies involving Indian nurse-midwives have

focused on assessment of their competence, but very few (24,136) have explored the nurse-midwives' perceptions and experiences of providing child-birth-related care in low-resource setting.

Institutional childbirth services in India

India has a population of 1.2 billion, of which 48.5% are women, and 49.9% of the total population of women in India falls into the reproductive age group (6,139). Historically, India has made a significant contribution to the numbers of global maternal deaths: a recent report shows that India contributes to 14% (40,000/ annum) of the total number of global maternal deaths. Jointly with Nigeria, this becomes one-third of all maternal deaths worldwide (4,6). The government of India has invested heavily to make institutional childbirth services accessible to everyone, while improving the health care infrastructure to accommodate the rising demand for institutional births (140–143).

In India, health services – promotive, preventive, curative and rehabilitative – are provided by three sectors: 1) the public sector (comprising central, state and local government institutions and their health facilities); 2) the private-for-profit sector; and 3) the private-non-profit, non-governmental organisations and charitable trusts sector (144). Currently, approximately 269 million Indian citizens are living below-poverty-line (BPL), while a large proportion of the Indian population exists barely above-poverty-line (145). For these Indians, the public health system, perhaps, is the only choice they have to seek health services – including childbirth services – that are cashless or available at a subsidised cost. Indian public health facilities are organised at four levels:

Level 1: Health Sub-centres (HSCs) and Primary Health Centres (PHCs) – respectively providing care to 3,000–5,000 and 20,000–25,000 persons per facility – are responsible for providing promotive health care such as immunisation, health examination and monitoring, and for primary health care, including normal childbirth (6). As of 2015, there are 153,655 sub-centres, and 25,308 Primary Health Centres in India (146).

Level 2: Community Health Centres (CHCs) provide health care services to a population of 80,000 to 120,000 persons per facility and are the first referral units for HSCs and PHCs. The CHCs provide specialised services for all referred clients, and also have facilities to manage common complications associated with pregnancy and childbirth. As of 2015, there are 5,396 CHCs in India (6,146).

Level 3: District Hospitals (DHs) provide all basic and emergency curative health services – including caesarean section – to all referred clients coming from PHCs and CHCs, and have facilities for intensive care units. Currently, there are 763 district hospitals in India (6,146).

Level 4: The medical college hospitals are the highest referral units in the Indian public health system and provide promotive, preventive, curative and

rehabilitative health care. Each Indian state has a small number of public medical college hospitals.

Regarding the health care workforce, India had 761,806 allopathic doctors, 104,603 dentists and 1,650,180 nurse-midwives in 2009. The Indian nurse-midwives must complete a formal education programme in Nursing and Midwifery under one of the two courses based on the Indian Nursing Council's syllabus: the General Nursing and Midwifery (GNM) course, where the trainees receive three-and-a-half years' nursing education with integrated midwifery education; and the B.Sc. Nursing course, where the trainees receive four-and-a-half years' nursing education with integrated midwifery. All receive the certificates of Registered Nurse (RN) and Registered Midwife (RM) and can work as 'Staff Nurses' at health facilities. The public health facilities also have Auxiliary Nurse Midwives (ANMs), who have received two years of training based on the Indian Nursing Council's syllabus, out of which one year has been in public health and midwifery. ANMs are also referred to as 'Multipurpose Workers-Female'.

The health centres, and the number of care providers attached to them, are not equitably distributed among the different states of India (147). States such as Bihar, Uttar Pradesh, Uttarakhand, Jharkhand and Chhattisgarh have especially severe shortages of health workers (less than 1 per 1000 in the population). The recommended ratio of nurses to doctors (at least 2:1 as a minimum, and 4:1 or higher for cost-effective quality care) is also very poor (148). This discrepancy produces burdens on the health workforce, in relation to time and materials, that act as a barrier to delivering equitable and compassionate care (24,149).

National Health Mission

Recent policy evaluations by the Government of India showed that, while the national programmes had been successful in improving the quality of maternal health services and outcomes in rural India, underprivileged urban areas – such as the urban slums – were lagging behind even the rural figures (1,141,150). The Government of India launched the National Health Mission (NHM) in 2013, and brought the previously running National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM) under one policy umbrella (151). Many schemes and interventions from the National Rural Health Mission have been retained and expanded under NHM.

Accredited Social Health Activists (ASHAs)

ASHAs are the community health activists introduced in each rural Indian community under NRHM directives for creating awareness of measures to promote and maintain maternal and child health and wellbeing in the community. State Governments train ASHAs using a centrally prepared training module. Any married woman – aged 25–49 years, having at least eight years

of formal school education, and some leadership and communication skills – can volunteer to be the ASHA for her village (152). The Auxiliary Nurse-Midwives (ANMs) – Auxiliary Nurses in India who have received 2 years of training, out of which one year has been in public health and midwifery – must meet the ASHAs at least once every fortnight to discuss the activities they have undertaken and the difficulties they have faced (6). Apart from their public health duties, ASHAs mobilise women and their families to seek institutional maternity care to a nearby public facility hospital, and accompany pregnant and postnatal women to their recommended health check-up and for childbirth. The government of India has started exploring the feasibility of graded training of ASHAs for providing home-based basic maternal and newborn health care (152). In Chhattisgarh, *Mitanins* perform these activities instead of ASHAs.

Mitanins

The term *Mitanin* has been adopted from an old traditional practice wherein two girls, close in age, choose each other as their closest friend, taking up the responsibility to support each other through life events – childbirth, sickness and during death – irrespective of personal cost. The Government of Chhattisgarh introduced community-level health volunteers called *Mitanins* (2001) – conceptualised to be a friend of the community – to address public health needs, including the promotion of institutional births along with other community services (153,154). One *Mitanin* per 250–500 persons was found to be effective (154).

Conceptualised at the state level, concurrently with the ASHA scheme at the central government-level, it was envisioned that the *Mitanins* would work in close collaboration with, and under the direct supervision of, ANMs.

The *Mitanin* of a community enters into a written agreement with the village-level governing body called *Gram Panchayat*, which lists her roles and responsibilities towards the community as the *Mitanin* as well as the remuneration that the community will pay her through *Gram Panchayat* in exchange for her services (153). Unlike ASHAs, who are paid in incentives by the government, the *Mitanin* is paid by the community. Financial incentives – as offered under the Mission schemes – to *Mitanins* for bringing women from their community for institutional childbirth, has aided in mobilising the women to seek pregnancy and childbirth care in the health facilities.

Janani Suraksha Yojana (JSY)

The JSY scheme was launched in 2005 under the National Rural Health Mission, and aims to encourage Indian women to give birth in public health facilities to reduce maternal morbidity and mortality. The free of cost childbirth services at public health facilities are made possible through the JSY funds. The scheme incorporates the following cash-free services other than the actual cashless childbirth:

Conditional Cash Transfer (CCT)

The CCT scheme integrates conditional cash transfer incentives for eligible women – both urban and rural – who are 19 years of age or above, and belong to a below-the-poverty-line family. The cash incentive is provided for the first two live births (6). In 2012-2013, for both the urban and rural population, 10.6 million women across India received this benefit (6).

Free ambulance services

Free ambulance services are provided for women in labour and their families for transport from their homes to a nearby public health facility and back to their homes after discharge. Usually, it is the local ASHA who places the call, but anyone can call the free ambulance for childbirth-related transport. Some states have implemented a ‘pink-slip’ system. The women and their families are provided with two pink slips cum declaration, during their antenatal visits, allowing them to hire a private vehicle to reach a nearby public health facility provided the ambulance that should have picked them up is already in use (23,155,156).

Free food at the hospital for postnatal women

Every public health facility receives funds under JSY to provide free food for women who have given birth and to one attending person per woman for the duration of their time in the postnatal ward. The food is provided by the hospital housekeeping department – either hospital owned or contractual – and consists of simple Indian staple dishes: *Chapaties* (Indian bread), Rice, two portions of vegetables, and lentil soup (157,158).

Impact of JSY on quality of childbirth services at public health facilities

The free-of-cost services and the implementation of ASHAs/*Mitanins* scheme have motivated a significantly high number of Indian women to seek hospital services (1,103). However, the health infrastructure and manpower resources at public health facilities have not improved at the same pace: several research studies have found that the labour rooms were crowded, understaffed and chaotic, with a very fast turnover rate of women giving birth (47,135,149,159). While women benefited from a cash-incentive for institutional birth, the hidden costs of institutional childbirth (accommodation and food for family members and missing out on work and wages) more or less nullified the incentive (23,156,157,160). Although identified as a significant influence among Indian women to seek institutional births, one recent Indian study on women’s opinions of the cash incentives shows that monetary incentive is no longer the main reason for women to seek institutional births (22).

Unique factors influencing health care delivery in Chhattisgarh, India

Chhattisgarh is a relatively new Indian state (carved out of the Madhya Pradesh state in central India in 2000), and is dealing with a unique threat to internal security that directly influences health service management: Naxalism. According to an old Indian study (unpublished thesis) by Singhal (1967), the Naxal movement was established in India in the 1960s from *Naxalbari* village in West Bengal (eastern state of India) when the landless farmers took up arms against the landlords, and later, against the Government of India and state governments, and which spread to other Indian states – Andhra Pradesh, Maharashtra, Odisha, Madhya Pradesh, Chhattisgarh, West Bengal, Bihar, and Jharkhand – over a 92,000 square kilometres geographical belt commonly called the ‘Red Belt’ (161). With active armed conflicts between the security forces and Naxal activists, Chhattisgarh, with its dense forest areas, provides ample shelter, especially as the activists are gradually driven out of other affected states. While the hospitals and health workers are usually unharmed during these conflicts, the government in Chhattisgarh also has to deal with internal security threats (active landmines, intentional road damages, kidnapping of officers and hijacking of vehicles) in addition to more common service delivery challenges. While no Indian study mentioned Naxalism as a cause behind the low retention of hospital staff, several studies from Chhattisgarh described suboptimal attitudes among physician students towards serving in remote areas, among significant numbers of non-clinical health care providers (trained in Indigenous medical system such as Ayurveda instead of allopathy) and nurse-midwives charged with providing allopathic care (162,163). Poor remuneration, challenging work conditions, and being charged with providing care at two or more health facilities without transport facilities also reportedly contributed to the low retention rates among physicians (163,164).

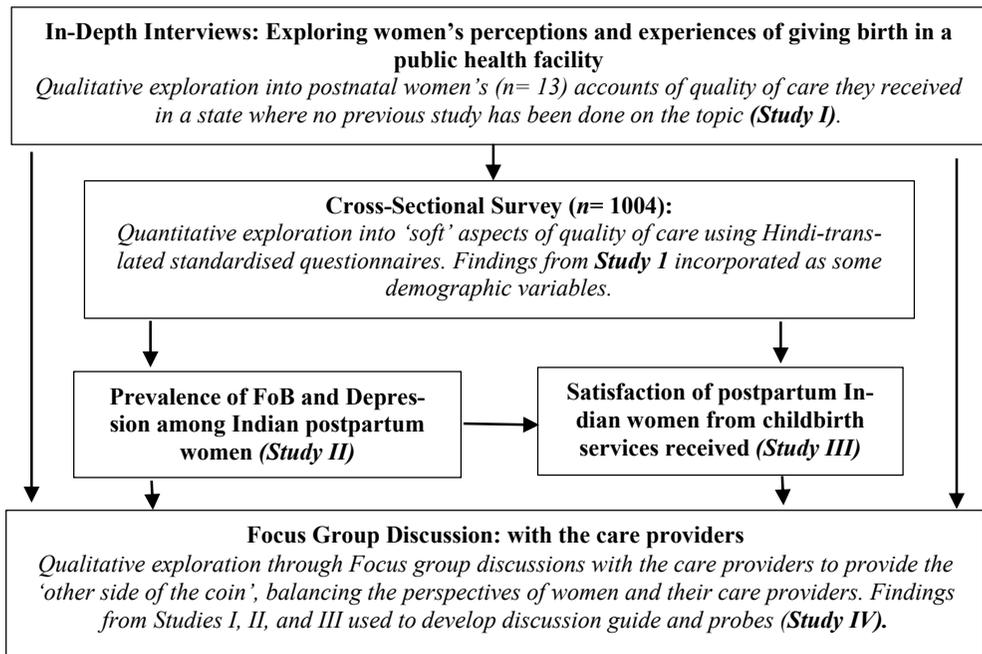
Rationale for the PhD project

Reportedly, socio-cultural and gender inequity is deep-seated within the societal norms in India (165). Studies have shown that the marginalised women were often side-lined when it comes to seeking health services – including perinatal health care – and seeking Skilled Birth Attendance (141,142). While the gender inequity-related concerns were reported to be the major service-delivery challenges in the more-developed Indian states; the less-developed states faced major challenges to bring equitable health care to all their citizens; often due to the reluctance of health care providers to be posted in remote areas for service delivery (140,142,143,149,166,167).

Based on the above review of the literature, it can be interpreted that limited research studies have been carried out in the recent past that place their focus

on the perceptions and experiences of the women who receive the institutional childbirth-related care. Very few studies explore the perceptions and experiences of the nurse-midwives – the primary care providers for normal births in public health facilities – about their perceptions of quality and their ability to provide quality care as they perceive it. More in-depth studies are required to understand the phenomenon. The current PhD project was conceptualised as one contributor towards bridging this gap. Figure 1 depicts the flow of four sub-studies that were planned, with the specific aims mentioned in the subsequent section:

Figure 1. Rationale for the selection and sequencing of the studies



Aim and objectives

This PhD project aimed to explore the quality of institutional childbirth services through the perspective of Indian postnatal women and the nurse-midwives who cared for them. The following objectives were formed to achieve this:

1. To explore the perceptions and experiences of Indian women giving birth in labour rooms of selected public health facilities in one high-focus district in Chhattisgarh, India.
2. To explore the prevalence of Fear of Birth (FoB) and postnatal depressive symptoms among postnatal women admitted to selected public health facilities in two high-focus districts in Chhattisgarh, India.
3. To study the postnatal mothers' satisfaction with quality of services provided during institutional childbirths at selected public health facilities in two high-focus districts in Chhattisgarh, India.
4. To study the perceptions and experiences of the care providers regarding providing quality childbirth care at selected public health facilities in two districts of Chhattisgarh, India.

Material and Methods

Study setting

The state of Chhattisgarh has a population of 25.5 million and a population density of 154 per sq. km. (compared to the national average of 312). There are 27 districts, 146 blocks, and 20,308 villages. More than half of these districts have been classified as remote, tribal (one-third of the state's population), and 'Naxalism' affected areas (137).

Chhattisgarh has an over-burdened public health care delivery system: for example, the state has 17 district hospitals, while it has 27 districts. The burden on the public health system has increased with progressively higher numbers of women seeking institutional birth services in public health facilities, while the same health facilities struggle to meet the demands of controlling HIV/AIDS, insect borne diseases and communicable health problems. While India, as a country, struggles with acute manpower shortage, in Chhattisgarh, the reluctance of care providers to be posted in areas of unrest, and the difficulties of ensuring that the health care facilities are functional in areas of unrest make service delivery even more challenging. Tables 1 and 2 reflect the health care infrastructure and status of health human resources in Chhattisgarh state, as compared to India:

Table 1. *Status of health infrastructure in Chhattisgarh*

Health facility level	Number of functional facilities	
	Chhattisgarh	India
Health Sub-Centres	5076	153,655
Primary Health Centres	741	25,308
Community Health Centres	148	5,396
District Hospitals	17	763

Table 2. *Health human resources in Chhattisgarh*

Provider Cadre	Required	In position	Gap
Allopathic physicians + specialists	3293	1417	1876
Staff Nurses	5000	1149	3851

There is a shortage of qualified health care providers in Chhattisgarh. About one-third of the sub-centres do not have a single Auxiliary Nurse Midwife

(ANM) despite the suggested allocation of two ANMs. The shortfall in doctors – Bachelor of Medicine and Bachelor of Surgery (MBBS) graduates and specialists combined – is about 72%. The shortfall in doctors is more apparent in the rural areas, with the majority being posted in urban and semi-urban areas. According to the Sample Registrar System Report 2012, the state had 18 obstetricians posted at CHCs rather than the required 149. Only 552 nurse-midwives were posted at CHCs and PHCs rather than the requirement of 1,798.

Chhattisgarh is a high-focus state for the Government of India in terms of reproductive health indicators, especially those related to women’s reproductive health. Table 3 presents the reproductive health indicators of Chhattisgarhi women as compared to the national average.

Table 3. *Reproductive health indicators of Chhattisgarh compared to national figures*

Indicator	Chhattisgarh (%)	India (%)*
Women married below 18 years of age	21.3	22.1
Median age of first childbirth among 25–49 year-old women	18.8	19.8
Percentage of mothers who received antenatal care in first trimester	38.6	45.0
Maternal mortality ratio	269	212*

* 2011 figures taken for comparison with last documented state figures

Further details on study settings are provided in the methodology sections of Studies I–IV. The table below presents key details of the studies, followed by a brief methodological description for each:

Table 4. *Study designs and participants*

Article	Method	Data collection	Participants	Analyses
I	Qualitative	In-depth Interviews at participants’ homes	13 postnatal women within 28 days of vaginal childbirth	Grounded Theory
II and III	Quantitative	Cross-sectional survey at selected health facilities	1004 women admitted to postnatal wards after vaginal or caesarean births	Descriptive statistics, Odds ratio, χ^2 test, linear regression analyses
IV	Qualitative	Focus group discussions at selected health facilities	24 nurse-midwives and three family welfare counsellors	Grounded Theory

Methodology – Study I

Design:

A qualitative study using a Grounded Theory approach was carried out in rural, sub-urban and urban communities surrounding the Community Health Centres and District Hospital in one district of Chhattisgarh state, with an aim to explore Indian postnatal women's perceptions and experiences of giving birth in public health facilities.

Participants:

Thirteen women, selected by purposive sampling, and later by theoretical sampling, participated in the study. All of the participants had given vaginal birth to a single live neonate, 7–28 days before data collection at one of the selected health facilities. Participants were interviewed at their homes. Older men and women of the families acted as the gatekeepers, to be informed of the study and to agree to grant access before the researchers conversed with the women.

Data collection:

Data were collected using in-depth interviews in *Hindi*, and were conducted, transcribed (in *Hindi*), and translated (to English) by the primary investigator. An independent linguistic expert back-translated the English transcript to validate its linguistic accuracy.

Data analyses:

Data analyses were performed manually using Strauss' Grounded Theory approach (open coding, selective coding, axial coding, and categorisation). The Paradigm model was used to explain the relationships between the categories and core category.

Methodology – Studies II and III

Design:

A cross-sectional survey was carried out in selected public health facilities – two district hospitals and seventeen community health centres – in two districts of Chhattisgarh, India with the aim of measuring the prevalence of FoB and postnatal depressive symptoms among women; as well as their satisfaction with the childbirth services they received.

Participants:

Women who gave birth at selected public health facilities – either vaginal or through caesarean – were invited to participate. Non-random consecutive sampling was used to invite participants. Women who had had a still birth; who had had a near-death experience; or who had witnessed their neonates having near-death experiences, were excluded. The sample size was calculated using power analyses and was adjusted for the dropouts experienced during the pilot study. In the end, 1004 participants were included in the analyses.

Procedures:

Wijma's Delivery Experience Questionnaire Version B (WDEQ-B); the Edinburgh Postnatal Depression Scale (EPDS); and the Scale for Measuring Maternal Satisfaction (SMMS) questionnaire – found most suitable in an Indian context after a review of the literature – were translated into *Hindi* and were linguistically validated by professional translators via back-translation.

Pilot testing, using the think-aloud technique to capture respondents' reactions to the questionnaire items, was carried out among 50 postnatal women, and vernacular modifications were made to the language as required. The modified versions of the questionnaires were administered to 100 women to check their comprehensibility. The *Hindi*-translated WDEQ- B and SMMS were evaluated for their psychometric properties before using them to measure FoB and satisfaction with childbirth services, respectively.

Instruments:

The final tool included questions on demographic variables and yes-no questions on services received in the health facility (based on Study I), and the three *Hindi*-translated questionnaires mentioned above:

1. The *Hindi* Wijma's Delivery Expectancy Questionnaire Version B (validity index 0.90) measures the fear of childbirth in postnatal women. The 33-item questionnaire follows a 6-item Likert Scale structure (score range 0–5), with a minimum-maximum score range of 0–165. A score of 85 or above on the *Hindi*-translated questionnaire indicates severe fear of childbirth; whereas a score of 99.5 or above indicates clinical fear of childbirth. Psychometric analyses reveal six sub-scales: lack of positive feelings; loneliness; concerns about the baby; lack of positive behaviour; concerns about labour pain; and concerns about childbirth.
2. The *Hindi* EPDS (Content validity 0.84) is a 10-item questionnaire where each item-score ranges from 0–3, with a score range of 0–30. Scores of 10 and above indicate probable depression. Scores of 13 and above indicate a depressive illness of varying severity.

3. The *Hindi* SMMS Normal (Validity index: 0.85) and Caesarean birth (Validity index: 0.80) scales are both 36-item 5-point Likert scales with a possible score range of 36–180. The cut-off scores for SMMS Vaginal and Caesarean Births are 105.5 and 108.5, respectively, where scores above the cut-off indicate more satisfaction with childbirth services. Both scales have 10 sub-scales:

For *Hindi* SMMS Normal birth; the sub-scales are: facilities and services; information and involvement in decision making; maintenance of privacy; compassion and respect; intrapartum care received; meeting the baby; postpartum care received; overall support provided; expectation from institutional birth; and experience of having institutional birth. The sub-scales in the *Hindi* SMMS Caesarean births are: facilities and services; information and involvement in decision making; having privacy, compassion and respect; managing stress; intrapartum care received; meeting the baby; postpartum care received; overall support provided; expectation from institutional birth; and experience of having institutional birth.

Data collection:

Ten female Research Assistants (RAs) underwent a 10-day rigorous training programme that included extensive item-wise discussions on the tool, memorising the working definition of each complex word on the tool to limit interviewer bias, practising mock interviews in the classroom, and field-based practice interviews in a facility not included in the main study. The RAs were tested on their ability to pose questions at the end of the training, and seven were recruited for data collection.

The primary investigator also participated in data collection, while providing direct supervision and mentoring to the RAs. The time-range per interview was 30–42 minutes. The response rate for completed interviews was 93%. Demographic data and standard questionnaires were completed with direct answers from the participants. Obstetric data around childbirth (maintenance of partograph, time of admission, time of childbirth, birthweight of newborn, primary care provider for childbirth) were obtained from the participants' hospital files.

Data analyses:

IBM's SPSS 24 was used for all statistical analyses. Descriptive analysis was carried out to define participants' characteristics and to show their demographic distribution. Non-parametric chi-square tests were carried out to study the effect of the variables related to demographic/obstetric/basic services upon FoB and depressive symptoms (Study II). In Study III, another independent variable – Mental health of respondents (limited to assessing the presence of

FoB and depressive symptoms) – was added to the variables related to demographic/obstetric/basic services. In both Studies II and III, linear regression models were prepared to identify the independent variables that had the strongest associations with presence of FoB, depressive symptoms (Study II), and satisfaction with childbirth services (Study III). In Study III; the Pragmatic Model of Patient Satisfaction in General Practice was used for deeper understanding of findings.

Methodology: Study IV

Design:

A qualitative study using a Grounded Theory approach was carried out with an aim to gain an in-depth understanding of the care providers' perceptions and experiences of providing childbirth services to women in labour at the public health facilities of two districts in Chhattisgarh, India.

Participants:

All care providers engaged in care provision during vaginal and Caesarean births – obstetricians, nurse-midwives, and family welfare counsellors – were invited to participate. Out of all invited, nearly 66% nurse-midwives; and 100% family welfare counsellors agreed to participate. All the physicians/specialists invited to participate refused due to their workloads. Theoretical sampling was applied in the third and fourth FGDs to involve participants with unique characteristics who could potentially challenge or support the emerging model.

Data collection:

Focus Group Discussions were conducted (in *Hindi*) at four public health facilities. The Primary Investigator moderated all FGDs, while an independent observer noted down non-verbal cues. An FGD guide was prepared based on findings from Studies I, II and III. The Primary Investigator, as moderator, noted down the reflections on the same day that the FGD had taken place; developed the *Hindi* transcripts; and translated them to English. An independent linguistic expert validated the translation.

Data analyses:

Analyses were carried out manually following Strauss' approach, as mentioned in the Methodology section of Study I.

Ethical considerations:

The overall project was approved by The State Government of Chhattisgarh (Letter No/Dir/Training/14/2014/89 dated 17th Feb 2014). Each included facility's administrators were informed about the purpose of the study, and time-slots for data collection were discussed to ensure that the research process did not disrupt service delivery, or encroach upon the visiting hours reserved for the women to meet families. The Primary Investigator and the RAs ensured that all postnatal women admitted to the postnatal wards of selected health facilities, and who were eligible to take part in the study, were invited to participate (Studies II and III).

A signed informed consent form was gathered from each participant (Studies I–IV), after making sure that the purpose of the study was clear to them and any doubts were cleared. Participants were aware that there would be no financial gain for them in participating in the study. Potential participants, who did not wish to participate or who wanted to end the interview mid-way, were respectfully permitted to do so. Formal permission was sought to record the conversation, to which all the participants agreed (except one during Study I) on the condition that the voice records would be destroyed once the transcripts were prepared. All transcripts were saved as password-protected files, accessible only to the Primary Investigator and the co-authors.

Codes were assigned to participants to ensure anonymity during transcription. Because the government had granted permission to interview care providers (Study IV), and because the elders in the family had granted permission to approach the women in their families (Study I); the primary investigator had an additional responsibility to ensure that the potential participants could refuse participation, even after the 'authorities' had said that the women should comply.

Conceptual framework used in the PhD project

The WHO framework for quality of maternal and newborn health was used to triangulate findings from Studies I–IV.

WHO Framework for the Quality of Maternal and Newborn Health Care

The World Health Organization developed the framework for the quality of maternal and newborn health care, as quality of care directly influences the decision to seek health care, and has been identified as a key component in the 'three delays' model of maternal mortality and near-death experiences. Because there is no consensus on a universal definition of 'quality of care', the WHO prioritized the development of this framework as a guide to establish

standards of care and quality measures. Developed through a rigorous process by 116 experts from 46 countries, the framework addresses the processes around hospital-based perinatal health care, within the context of a health system. At the same time, the processes around childbirth care may have a long-term impact on the individual and facility level health outcomes. Therefore, the structure of the particular health system, the processes determining the quality of maternal-neonatal care, and the individual and facility level health outcomes, have been identified as the three components contributing to the quality of maternal and newborn health care that form the backbone of the WHO framework (Figure 2). A brief description of the framework follows.

The health system

According to the framework, the health system creates the structure that enables access to improved quality of care. The Framework identifies six building blocks that are required to establish an effective health system: service delivery; health workforce; information, medical products, vaccines and technology; financing, leadership and governance; and, a structure for establishing health system analyses and points of interventions. In this thesis, the ‘Information’ component has been presented in combination with the ‘Medical products, vaccines and technology’ component for better interpretation, while the ‘Structure for establishing health system analyses and points of interventions’ component was out of the scope of this thesis.

The quality of care processes

Eight quality standards – with a total of 31 statements for a holistic presentation of the standards – have been prioritised in the framework: evidence-based practices for routine care and management of maternal-neonatal complications; actionable information systems; functional referral systems; effective communication; respect and preservation of dignity; emotional support; competent, motivated human resources; and, essential physical resources available.

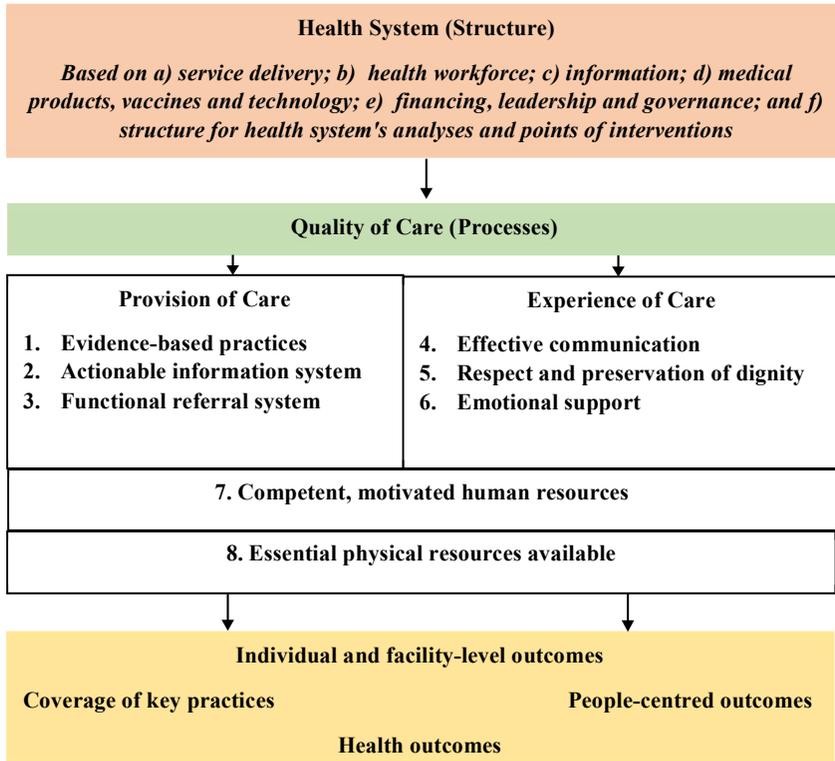
Health outcomes

Individual and facility health outcomes are conceptualised as the direct result of the preparedness and effectiveness of quality care processes within the health system.

The following section presents the results emerging from this PhD project after synthesizing the results from the four sub-studies. Because the WHO framework was put into the public domain in 2016, while the PhD project was initiated in 2012, the Primary Investigator has applied the framework to the available dataset *ex post facto*; synthesizing the results of four sub-studies in a way to present a comprehensive picture of the quality of maternal and newborn health care in the public health facilities of Chhattisgarh, where the data

have come from the recounts of care by the receiving women and their care providers.

Figure 2. WHO Framework for the Quality of Maternal and Newborn Health Care



Results

A brief profile of the participants from the cross-section survey is presented in the table below:

Table 5. Demographic profile of the survey participants from Studies II and III ($n = 1004$)

Participant profile	<i>n</i> (%)
<i>Mean age (in years)</i>	23.7 (SD 3.4)
<i>Highest education level (n= 1001)</i>	
- Never went to school	80 (8.0)
- Up to 8 years of formal schooling	483 (48.3)
- Up to 12 years of formal schooling	376 (37.6)
- Doing graduation/ graduate	62 (6.2)
<i>Working status</i>	
- Homemakers	695 (69.5)
<i>Positive perception of self-health</i>	866 (87.2)
<i>Socio-economic category (n= 991)</i>	
- Scheduled caste	146 (14.7)
- Scheduled tribe	156 (15.7)
- Other backward classes	588(59.3)
- General category	101 (10.2)

The dataset from the four studies presents a word-picture of existing health system in which services are being delivered. The quality of care processes are based on the women's and care providers' verbal accounts of experiencing giving birth/assisting a birth at a public health facility (Studies I, II, II, IV). The health outcomes have been described based on Mental Health outcomes (Study II), and satisfaction outcomes (Study III).

Describing the health system at public health facilities of Chhattisgarh, India:

The women's and care providers' accounts provided information on the health system proposed in the WHO Framework for quality of maternal and newborn health care, as described below.

Service delivery:

The participants' accounts of service delivery at the CHCs and DHs revealed a versatile and people-centred approach. The government was striving to increase the 24/7 childbirth service delivery points at a sustainable pace (Studies I, IV). Approximately 81% of the survey participants had either received or were about to receive the conditional cash transfer for institutional childbirth (Study II). Although the women appreciated the incentive, only 8% named it as the primary reason to seek institutional childbirth (Study II); nearly 80% had sought institutional birth services upon being motivated by *Mitanins* (Study II). All participants had received free food of quality (Studies I, III); and the care providers harboured a sense of pride over the 'additional' cashless services being offered to make the institutional childbirth more appealing to the women and their families (Study IV). Institutional childbirth was perceived to be safer compared to home births (Study I); and the public trusted the public health facilities to provide appropriate care (Studies I, IV). However, giving birth at Community Health Centres was associated ($p < 0.001$) with more positive birth experiences (Study III).

Health workforce:

An acute shortage of skilled human resources was reported by participants (Studies I, IV). The health teams at the CHCs and DHs had both technical and non-technical members. The technical team comprised: the obstetrician/physician posted at the health facility; the nurse-midwives; and the ANMs; while Family Welfare Counsellors and *Mitanins* were the most involved non-technical care providers (Study IV). Participating women had experienced role-confusion and their identification of care providers were influenced by their perceptions of the uniforms: white uniforms meant nurse-midwives, and mufti clothes with a white lab-coat meant physicians (Study I). Although nurse-midwives had been the primary care providers for the majority (83.5%) of women during labour and/or childbirth (Study III), women did not perceive nurse-midwives to be skilled care providers (Study I). The Family Welfare Counsellors seemed to be more sensitive and aware of the women's rights and their violation compared to their technical counterparts (Study IV).

Information, medical products, vaccines and technology

The participating women had received information about the benefits of institutional childbirths and their entitlements through the media, through pamphlets, by *Mitanins* and ANMs, by their families and friends, and from their own previous experiences (Study I). Participants in the qualitative studies agreed that the government was striving to improve the availability of medical

products at all health facilities, either by direct investment, through partnerships or by subsidising the costs of expensive tests (Studies I, IV). However, dysfunctional instruments and machines remained a problem (Studies I, IV). A shortage of protective gear, and screening devices, such as HIV-Kits, was also mentioned as a challenge (Study IV).

Financing, leadership and governance

Women and care providers were aware that the *Janani Suraksha Yojana* benefits were financed by the government (Studies I, IV). Leadership within a health facility lay with the physicians, with a rigid hierarchy observed between physicians and nurse-midwives; junior and senior care providers; and care providers and women in labour (Study IV). The government of India mandates, guidelines and protocols governed all health services, and incorporated the latest evidence and recommendations (Study IV).

Describing quality of care at the public health facilities of Chhattisgarh, India:

The quality of care processes were assessed only for uncomplicated vaginal births, and for those caesarean births that resulted in a live mother and neonate with an uneventful recovery period. The quality of care processes included the 'provision of care' and 'experience of care' components of the WHO framework. A brief description on the key findings is presented below:

Provision of Care:

The provision of care components incorporate the following key factors:

1. Evidence-based practices for routine care and management of complications:

Descriptions from women and their nurse-midwives revealed a mixture of evidence-based practices with traditional and/or non-evidence-based practices (Studies I, IV). While the nurse-midwives shared their balancing acts to make the reality of childbirth services meet the expectations of community and the government, the women's descriptions provided insight about the women enduring childbirth in a reality that was very far from their expectations (Studies I, IV).

The evidence-based practices being followed were: allowing food and water in the early stages of labour; no mandatory perineal shaving/enema at admission; and avoiding unnecessary medical interventions to ensure normal childbirth (Studies I, IV). Some evidence-based practices were initiated, but

had not yet been established as routine: for example, the nurse-midwives' descriptions of the frequency of per-vaginal examinations ranged from accurate to inaccurate; and their descriptions of monitoring uterine contractions revealed some misconceptions and malpractices (Study IV).

There was a discrepancy between the women's and nurse-midwives' accounts of the use of Oxytocin in the first stage of labour: while women described having received one or two 'injections to bring more pain' in the first stage of labour, the nurse-midwives reported that Oxytocin was being administered only upon delayed progress of labour (Studies I, IV). Similarly, the application of fundal pressure to cut short the second stage of labour was mentioned by the mothers in the qualitative study, however, data from the survey, and the nurse-midwives' descriptions did not support this finding (Studies II, III, IV).

Some women recalled undergoing perineal wound repair without local anaesthesia (Study I). Quantitative exploration of this phenomenon (vaginal births: $n = 860$) revealed that perineal wound repair without pain relief was, indeed, a common practice: 41% of the respondents had experienced a perineal wound – tear or episiotomy – out of whom nearly 59% had undergone perineal wound repair without LA (Study II). Exploring the reasons for avoiding LA revealed that the midwives perceived LA-sensitivity to be very common, and so, did a LA sensitivity test for all women in their care, and avoided LA for those women who they considered to be sensitive (Study IV). This sensitivity was determined by symptoms such as nausea/vomiting and lightheadedness (Study IV). The nurse-midwives excluded LA when the wound was perceived to require 'a stitch or two' (Study IV).

The participating women perceived that separating the neonate from them at birth, to be cared for in the radiant warmer was 'safe and essential' (Study I). Nurse-midwives often faced the families' insistence of having the neonate cared for in radiant warmers, and described how they often had to bend to community expectations to keep the peace (Study IV).

The infection control measures, especially the cleanliness of the labour rooms, was also discussed in the qualitative studies. While women disliked being in unclean labour rooms, they seemed to understand the difficulty faced by sweepers in having to clean a perpetually crowded labour room (Study I). The nurse-midwives recalled that busy labour rooms, such as those at the district hospitals, had such high frequencies of women coming and going, that cleaning after each birth was not manageable and that cleanliness soon became sub-optimal, and how they often sought the help of family members in cleaning up (Study IV).

2. Actionable information systems

Nurse-midwives' descriptions revealed that the health facilities had a well conceptualised standardised medical record system in place with scope for recording the general medical history of women, as well as obstetric records,

routine test records such as Haemoglobin level, blood group, Rh factor, and HIV/infectious disease status etc. (field notes, Studies II, III). However, observation of the medical records revealed that individual services, such as whether LA was administered to a woman before perineal wound repair, were not mentioned (field notes). Each facility submitted monthly maternal and child health records to the district headquarters, and the nurse-midwives claimed that it was an understood responsibility of the female health care providers to ensure the completion of health records (Study IV).

The women were issued an Antenatal Care card, to be brought at each ANC visit (Study I); however, the childbirth records were maintained independent of their antenatal cards (field notes). Although maintaining partographs was mandatory for each birth, it was viewed as a ‘documentary liability’ by the care providers (Study IV); and only 8% of the women had an accurately completed partograph (Study III). The neonates’ details were maintained in the same file as their mothers (Field notes). The nurse-midwives expressed that they often prioritised providing hands-on care to several women at once, over maintaining concurrent partographs for all. Delayed entries into partographs, or unfilled partographs in medical records, were justified by finding loopholes in the government mandates. This ‘grey documentation’ also extended to other medical records (Study IV).

3. Functional referral system

Descriptions by the participating women and care providers both revealed a strong referral system that had been established to support the prompt transfer of women to a facility prepared for emergency if the need arose. The nurse-midwives shared that the emergency ambulance (called by dialling 108), with a driver, was always available for transferring the women out, however, sometimes there could be instances when more women required referral while the vehicle was out transferring others (Study IV). Women mostly travelled in private vehicles in those instances (Study I). The nurse-midwives mentioned instances where they refrained from starting a partograph for a woman who they anticipated would be referred out (Study IV).

Experience of care

This section presents the findings on experiencing the care: giving it, and receiving it. The key findings are presented under their respective standards.

4. Effective communication

Women had limited opportunities to engage their care providers in frequent interaction during the immediate postpartum period: they felt ‘guilty’ about demanding ‘too much’ by engaging them in frequent interactions (Study I). Women who had had a caesarean birth were four times more likely ($p < 0.001$) to have one or more interactions daily with the nurse-midwives compared to

women who had had vaginal births: nearly 55% had had no interactions; whereas 24% had talked to their nurse-midwives only once in a three-day period of their mandatory postpartum hospital stay (Study III). Being able to communicate with care providers also had association ($p < 0.001$) with higher satisfaction with childbirth services among women who had had vaginal births (Study III).

The nurse-midwives, although they started the day by being welcoming and helpful, were soon overcome by their heavy workload, and they purposefully adopted a closed body language to discourage frequent interruptions for communication, thus creating more time for hands-on care (Study IV). The communication was usually limited to: confirming the women's medical and obstetric histories; providing crucial information about bearing the labour pains; breastfeeding; and promoting family planning (Studies I, IV). All care providers provided the same information, but the focus could differ from promoting wellbeing to promoting contraception (Study IV).

5. Respect and preservation of dignity

The exploration of women's experiences of receiving respect and dignity while giving birth brought out several concerns: the participating women shared instances of verbal and physical abuse; faced neglect; and were manipulated into complying with the providers' instructions by naming potential threats to the neonates on not complying (Study I). Among women having vaginal births, nearly 93% had been left undressed below-the-waist without a cover-sheet inside the labour rooms, whereas 54% had had no privacy while breastfeeding (Study III). Among women having Caesarean births, some (26.4%) had not received any cover sheet while being prepared for operation, while 61% had had no privacy while breastfeeding (Study III).

While some care providers had been verbally cruel or had resorted to physical assaults, others had stopped their colleagues from being abusive (Study I). The women had experienced deep shame – that worsened in the presence of male care providers – upon being left naked among several other women in the same situation, which gradually converted into apathy (Study I). Protesting against this treatment evoked anger amidst the care providers; who then neglected such women while providing care to others, or ordered the women to seek health care elsewhere. Women usually acquiesced to the mistreatment (Study I). Complaining to family members often escalated the conflict, resulting in worse treatment of the women (Study I).

The nurse-midwives empathised with the women's situation because, in most cases, the place of childbirth was decided based on the husband's convenience. They perceived that the poor women, who could not afford to seek better services elsewhere, were the most common victims of childbirth abuse (Study IV). The care providers were aware of this childbirth-related abuse directed towards women, and categorised it into two groups:

Being verbally sharp, to shock the woman out of her labour pain (so that she could actively bear down) was described as ‘good’ abuse, intended for the ultimate benefit of mothers and their neonates (Study IV). Women participating in qualitative studies also perceived that they were scolded or mishandled ‘for their own good’ (Study I). Physically hurting a woman in labour or using sexually explicit language was disapproved of by the care providers and was labelled as ‘bad’ abuse. However, the nurse-midwives had witnessed ‘bad’ abuse, or had engaged in it with women who became hysterical, uncooperative, or abusive towards the nurse-midwives (Study IV).

The nurse-midwives expressed that, while labour room abuse was being actively explored, only the abuse towards women was under scrutiny (Study IV). The abuse directed by the women and their family members towards the nurse-midwives remained unaddressed. The nurse-midwives raised several concerns about personal safety and security; being posted alone on night duties at outreach facilities, they sometimes did not even have a night watchman to offer security to them or the patients who had been admitted to the health facility (Study IV). Several times a month, the nurse-midwife on night duty was harassed by family members, who threatened her with physical harm, detained her at their women's bedside by physical force; or called local politicians to exert pressure on the nurse-midwife to perform all of the procedures that the family wanted (Study IV). The nurse-midwives perceived a discriminatory attitude from their superiors, who demanded that the nurse-midwives perform night duty alone, but excluded female physicians from night duty because of ‘safety reasons’. The participating care providers also resented the fact that the female physicians were referred to as the ‘lady’ doctors, which indirectly implied that other female health workforce were not ‘ladies’ (Study IV).

6. Emotional support

Emotional support was identified as a very crucial component of childbirth by both women and their care providers. The nurse-midwives expressed that they often had to cut short their bedside time to provide psychological support in order to provide hands-on care to someone else, even though they wanted to spend time with the woman (Study IV). The nurse-midwives relied on the birth companions to provide the non-technical support while they provided technical care (Study IV). The nurse-midwives shared that each woman could now ask any other woman to be her birth companion. The birth companions were primarily seen by the nurse-midwives as their own assistants, who often took up the softer duties of talking to women, comforting them and encouraging them, making time for the nurse-midwives to provide clinical care. However, the nurse-midwives expressed outrage upon the perceived interference of the birth companions in clinical matters. The nurse-midwives felt that having a birth companion catering to the woman’s every need sometimes made the women feel ‘too important’ (Study IV).

Women, on the other hand, were divided in two groups based on their feelings towards having a birth companion. While some women were happy to have a familiar, trustworthy person to look after their rights when the woman was vulnerable, others preferred not to have a birth companion. They expressed that having a loving concerned person had made them 'weak', while some women felt that having a birth companion to witness their exposure and shame inside the labour room meant that every subsequent meeting with this companion became a reminder of their humiliation (Study I).

7. Competent motivated human resources

While the nurse-midwives perceived themselves to be fully competent to provide all of the necessary perinatal care, being short-staffed meant that nurse-midwives had to constantly juggle their duties to ensure the most basic care was provided to all of the women instead of providing the best possible care to a select few (Study IV). During the course of the day – especially if they were on duty alone – they faced several dilemmas (choosing to care for an emergency medical-surgical case by leaving a woman in early normal labour; choosing between performing immediate postpartum care versus providing immediate neonatal care); and used several justifications to reduce their professional guilt (Study IV).

The government's 'carrot (to entice women for institutional childbirths) and stick' (to the care providers upon failing in duties or complaining too much) attitude left them feeling unappreciated, misused, fatigued and demotivated (Study IV).

8. Essential physical resources available

There seemed to be a consensus that the hospital services had improved in terms of physical resources: the new labour rooms had adjoining washrooms, had regular water and electric supply, and had autoclave and automated washing machines (Study IV). Regular in-service training sessions were organised for updating skills among staff (Study IV). The visiting experts provided useful tips to further improve labour room setting and service delivery, but critical reports to the government by the visitors could create more challenges for the care providers (Study IV). Women arriving too early at the health facility added to the service load (Study IV) and were often admonished by care providers, and were reluctantly admitted to the health facility only after the women's insisting (Study I). Such women often spent long times waiting in the corridors outside the labour room, and had to rest on the corridor floor (Study I). The care providers, helpless due to the shortage of beds, could only empathise (Study IV). Most women (98%) had received their own bed at the health facility in the postpartum period, however, only 36% had received a bedsheet to cover their beds (Study III). Only one-third of the respondents had had a

bedside locker for their belongings (Study III). During early labour, 96% participants had neither received a sanitary pad from the hospital (Study III), nor were they allowed to use their own pads (field notes).

Describing individual and facility level outcomes:

The health system's preparedness and the processes applied resulted in reliable health outcomes: screening the postnatal women for FoB and PND revealed that 13.1% women experienced Fear of Childbirth, while 17.1% of the respondents had postnatal depressive symptoms (Study II). The presence of FoB and PND were significantly associated ($p < 0.001$) (Study II). Among women having vaginal births, FoB was more commonly experienced by women who had given birth at District Hospitals ($p = 0.001$); and among those who had been advised by a health care provider to have an institutional childbirth ($p < 0.05$). In the same group, depressive symptoms were more common among women who had given birth to a low birth weight neonate ($p < 0.05$) at a District Hospital ($p < 0.001$) (Study II).

Among women having Caesarean birth, FoB was more commonly experienced by women who had spent more than six hours at the childbirth facility before giving birth ($p = 0.001$), whereas postnatal depressive symptoms were more commonly experienced by women who got married at an older age ($p < 0.05$); and for those who seldom got the opportunity ($p < 0.05$) to talk to their care providers (Study II). Having FoB and PND was associated ($p < 0.05$) with lesser satisfaction with childbirth services received, which became non-significant after regression analyses were performed (Study III).

Among respondents having had caesarean births, 79% were satisfied with the childbirth services they had received at the public health facility. In contrast, nearly 69% of all respondents who had had vaginal births were satisfied with the childbirth services they received. However, the proportion of satisfied women among women who had had vaginal births differed significantly ($p < 0.001$) among CHCs (nearly 81% satisfied) and DHs (nearly 60% satisfied) (Study III). Among women having vaginal births, having light food in the early stages of labour ($p < 0.05$) and having a coversheet to maintain their privacy inside the labour room, was associated with higher satisfaction (Study III). Among women who had had Caesarean births; having a positive perception of self-health and being a working woman was associated with higher satisfaction (Study III).

Discussion

The key results from this PhD project were:

- There existed a mixture of evidence-based and non-evidence-based practices in the provision of institutional childbirth care.
- Documentation of childbirth processes was discontinuous, with instances of grey documentation.
- Perineal suturing without local anaesthesia was experienced by two-thirds of all survey-participants.
- Childbirth abuse was reported by both women and care providers, with a difference in perspectives.
- FoB, and satisfaction with childbirth services, were multi-dimensional concepts in India as has also been shown globally.
- Prevalence of FoB and postnatal depressive symptoms was comparable to respective global prevalence.
- Prevalence of satisfaction with childbirth services among women having vaginal births was higher at CHCs compared to at DHs, while women having CS were more commonly satisfied with services received compared to women with vaginal births.
- There existed a gender-related power dynamic inside the labour room, influencing experiences of receiving services as well as of providing services.
- Care providers found their work to be overwhelming, worked with acute manpower shortages, and did their best to balance the reality of childbirth services with stakeholders' expectations.

Based on the findings, the biggest hurdles in providing high quality care seem to be the sensitivity – towards women's needs as well as the needs of their care providers – and the acute shortage of manpower, which was the most commonly mentioned confounder. The manpower shortage, in fact, is significant enough so that even the women in labour could perceive it and felt guilty about demanding 'additional' services from care providers who were visibly struggling with the work demand. The key concerns and reflections revolving around the above mentioned key findings are – again, for the most part – presented using the quality care processes of the WHO framework for the quality of maternal and newborn health care.

‘The perceptions-evidence paradox’: A mixture of evidence-based and non-evidence-based practices

The findings from this project suggest that there exists a mixture of evidence-based and non-evidence-based practices in the public health facility labour rooms: women’s account of receiving Oxytocin in the first stage of labour is one such example; however, this practice was denied by the care providers. The discrepancy can be interpreted in two ways: the two qualitative studies were carried out roughly 18 months apart, and a government order to stop the unnecessary use of Oxytocin was passed by the government sometime during this period, which may have resulted in more evidence-based use of Oxytocin. On the other hand, care providers – who have been receiving advice related to evidence-based practice from several visiting experts – could have denied this malpractice to provide more ‘acceptable’ response to the query. This malpractice, especially because having more labour pains by receiving injections seemed to be highly appreciated by the women, may be part of an invisible pact: women demanding ‘more pain’ – as has also been reported in other Indian studies (25,168) – and the care providers administering Oxytocin because of its perceived impact on shortening the first stage of labour, probably to increase women’s turn-over inside busy labour rooms. However, the participating care providers seemed to be aware of the fetomaternal complications associated with Oxytocin’s misuse, such as neonatal asphyxia along with uterine hyper-stimulation as reported in other studies too (169–171). Separating the newborn from its mother, and interrupting skin-to-skin contact is another malpractice, also described in other countries (172–174).

The results show that the existence of malpractice is not solely due to a lack of information and awareness among the care providers, which is in line with other studies across the globe (175–177). There exists a paradox between what the community perceives as ‘safe’ and what is proven to be ‘safe’, and unrealistic expectations from the women and their family members may initiate conflict when their expectations are not fulfilled. Interventions to make the community aware of evidence-based practices may be as important as training care providers in the right practices, while also helping to formulate policies around providers’ compliance.

Withholding pain relief: A common practice?

Women’s descriptions of childbirth services revealed that some had received perineal wound repair without any local anaesthesia. The cross-sectional survey further explored this phenomenon, corroborated the findings from the qualitative study with women, and quantified its occurrence. At the same time, not having any hospital records on the administration of LA/perineal wound

repair meant there was no way to corroborate this finding. Qualitative explorations with care providers showed that, while they were cognitively aware that pain relief should be given before perineal suturing, they avoided it for women who showed a sensitivity to a test dose of LA – such as nausea and light-headedness – or made a non-evidence-based judgment call to withhold LA if the wound required very few stitches.

This leads to several ethical concerns: suturing one of the most sensitive parts of human body without LA is an unnecessary and avoidable harm. There seems to be a gap in care providers' understanding of LA sensitivity; because the cardinal symptoms they used to diagnose sensitivity (nausea, light-headedness) are also known to be commonly experienced by women in late labour, especially by those who are dehydrated (178), there may be a chance that the LA sensitivity is wrongly and over-reported. Indian nurse-midwives' competence has been questioned in other Indian studies, too (134,135), and the majority of passing out nurse-midwife students (56–63%) in an Indian state were found to have low confidence in administering LA and in performing episiotomy/repair (134).

However, the phenomenon of perineal wound repair without LA has not been reported in any other study before. A recent cross-sectional Indian study ($n = 120,243$) explored the prevalence of episiotomy in 18 tertiary care hospitals in India, and, while the prevalence rates it reports are comparable to the figures in current project, it does not mention episiotomy repair practices at all (179). This can be interpreted in light of the fact that most of the studies set in labour rooms follow either childbirth processes or newborn care processes. Because perineal wound repair technically falls into immediate post-partum care, it has probably remained unstudied.

Grey documentation: An everyday dilemma

The results from sub-studies revealed that care providers often had to choose between providing hands-on care versus maintaining complete records. Most often they chose to provide care, while completing the records retrospectively. This strategy – especially in the case of partographs – has also been reported in other studies (180–182). In this project, the nurse-midwives' accounts showed that they refrained from starting partographs for those women who were sure to be referred out, to reduce their workload. This raises concerns as the women most at risk of complicated childbirth were being referred out without an accurate medical record. This counteracts the intention behind partograph maintenance, and requires action. Another practice in relation to partographs – using the loopholes in policies to justify incomplete partographs in women's medical records – shows that, while the partograph's utility is consciously acknowledged by the care providers, it does not necessarily rate high

among the care-providers on their work list. This finding is similar to the reports in other studies in India (183,184) and in other low- and middle-income countries (131–133,180).

Some ambulance/roadside childbirths, especially at lower-level health facilities struggling to meet their monthly childbirth targets, were being recorded as a hospital birth. No other scientific study has reported this tendency. While it highlights care providers' inclination towards grey documentation, it can also be interpreted that sometimes having inflexible government orders hinders transparency in the health care delivery system, and may result in fabricated data, thus compromising census reports.

Power politics of labour rooms: Gender plays a silent role

A strong gender hierarchy was discernible in the women's and care providers' – who were also women – accounts of receiving and delivering care. Women's accounts showed their helplessness (having no say in choosing the place of birth; having to endure childbirth in an unpleasant labour room; being unable to engage the care providers in communication, etc.) within the health care institution; while the care providers' accounts showed that junior nurse-midwives had to submit to their seniors; and nurse-midwives as a whole submitted to physicians and the government. The nurse-midwives' accounts of having to overwork as a norm, being ignored or admonished upon complaining against overwork, and sometimes receiving threats of being posted out to outreach health facilities, demonstrated that they were as helpless as the women they served. The rigid work hierarchy, including instances of bullying and its negative impact on the nurses and midwives – creating a fragmented self-esteem – has also been reported in other studies (127,128,185,186).

FoB, postnatal depressive symptoms and women's satisfaction with childbirth services received: There are associations

The findings showed that there was a strong association between the presence of FoB and depressive symptoms among the participants. FoB and depressive symptoms have been shown to have an association in several other studies around the globe (32,36,39,187–189). Women who had frequent interactions with nurse-midwives while having caesarean births more commonly experienced FoB and depressive symptoms. Additionally, women who gave birth vaginally and who did not have any interactions with nurse-midwives in the

postnatal period also more commonly experienced FoB and depressive symptoms. This finding was in line with other studies that showed that provider interaction was a very important area of care that women expected and, if not fulfilled, the lack of interaction contributed to experiencing negative feelings towards giving birth in hospitals (38,84,190,191).

Women who had had CS births were more commonly satisfied with their childbirth experiences compared to women who had had vaginal births; while women who had had vaginal births at CHCs were more satisfied with services received compared to women with vaginal births at DHs. The increase in negative experiences of childbirth occurring in crowded/busy labour rooms has been reported previously (192). FoB was associated with lesser satisfaction with childbirth services among women who had had vaginal births, a finding which is in line with global evidence (50), and the majority of the women were satisfied with the childbirth services they received. This finding can be interpreted in light of the fact that several Indian studies have described surviving childbirth as the primary motive for women to seek institutional childbirths; and that they willingly trade the 'desirable', more humane services for perceived 'essential/lifesaving' services (25,40). Having this very basic or low expectation could be producing the satisfaction experienced, and causing a 'ceiling effect' while responding to satisfaction-related questions. This has also been reported in previous studies on satisfaction (50,193).

The multidimensional nature of FoB and satisfaction: A challenge as well as an opportunity

The results from the cross-sectional survey show that, while a lack of infrastructure – lack of bedsheets and blankets – did negatively influence women's satisfaction with the services, soft processes such as having the opportunity to interact with care providers had more influence on women's overall satisfaction with the services they received. This finding was in line with the pre-existing empirical data (194). The higher rates of satisfaction may also be contributed to women having very low expectations of institutional births, and to the 'ceiling effect' making people rate services higher, which has been reported as a confounder in other scientific studies (50,193).

Abused and abusive: The cycle of labour room mistreatment

Labour room abuse – now being termed as labour room violence – has been a growing universal concern and it undermines the quality of childbirth services in many ways. The literature identifies labour room abuse as abuse that is

physical, such as slapping, pinching, or performing procedures roughly; or verbal, such as shouting, using sexually explicit language, or threatening; and non-verbal, such as neglecting, or withholding care (46,195). The literature also shows that childbirth abuse can be intentional and unintentional (46). The findings from this study were in line with the global evidence of labour room abuse.

While the qualitative studies in this project revealed a rich description of abuse directed towards women, women seemed to justify the abuse by claiming it was done for 'their own good', a term that was also used by the care providers. The Indian women's acceptance of being abused for their own good can be interpreted in light of their probable habituation to receiving abuse; some other Indian studies describing domestic violence (including that during pregnancy) reveal a pattern: subordination by married women to families' directives, 'wife beating', neglect, and living with a low familial-status directed towards Indian daughters-in-law; especially if the foetus was expected to be female while the demand was for male (196–199). Women in this project also seemed to accept any abuse they experienced to be ultimately 'for their own good'. This leads to reflections whether women have different benchmarks of defining abuse and how much it influences their reporting of abuse.

In this project, the participating nurse-midwives described the labour room abuse directed towards women to be 'good' abuse and 'bad' abuse. They drew the investigators' attention towards another type of abuse inside the labour room: abuse directed towards the nurse-midwives by the family and community members accompanying the women for childbirth. While we did not find similar evidence from other studies, bullying towards nurses and midwives from colleagues has also been reported in other studies (185,200), and one study from Australia mentions that the midwives experienced a constant fear of litigation and felt that they were often 'thrown to the wolves' (201).

However, findings from this project reveal an aspect of labour room dynamic, which is not well studied, but is critical in light of the participating nurse-midwives' reflections: they frequently had verbal spats with family, received verbal threats to their physical safety, sometimes were physically detained by families, and, in a few cases, had to call the police to diffuse the situation. Being threatened by the family members of women they were trying so hard to serve well, gave root to deep resentment and frustration, which was projected onto the women these nurse-midwives served. This 'abused turned abusive' cycle requires closer scrutiny, at least in the setting where the study was conducted.

Mental health of care providers: Implications for quality of services

There seems to exist a professional ‘stigma’; a sense of ‘being less’, around being a nurse-midwife. The women participating in the qualitative studies described the nurse-midwives as ‘those who clean and help the doctors’ in spite despite the fact that the majority of the participants in the cross-sectional survey been helped by a nurse-midwife while giving birth, but seemed not to realise it (Field notes). The nurse-midwives seemed to think they could have ‘done better’ professionally. This fragmented professional identity phenomenon has been described in other studies, albeit among nurses and nursing students (202,203). The ‘stigmatisation’ of nursing in India – starting historically from colonised India – is also described as an ongoing phenomenon (204).

The participating nurse-midwives’ descriptions indicated that they were affected by diminished mental health. While no recent study in India has explored care providers’ mental health, global evidence suggests that stressful work situations may be associated with depression, burn-out and anxiety disorders among nurses and midwives (205,206). The WHO framework for the quality of maternal and newborn health care (207) mentions competent and motivated human resources as a key component of its quality of care processes, but the 31 statements of WHO framework used do not mention the care providers’ health in its standards of care and measures of quality, revealing a gap.

At the same time, this project’s findings reveal highly stressful work conditions, creating a concern that the Indian care providers’ – especially the nurse-midwives’ – mental health needs a closer assessment. This is also relevant because the global empirical evidence suggests that the personal health of care providers affects attrition, creates workforce shortage, and, ultimately, influences quality of care (124,208,209).

Safe childbirth and institutional childbirth services: Non necessarily synonyms

Institutional childbirths in India, and indeed, other middle- and low-income countries have emerged as a pragmatic approach to provide skilled birth attendance to all women in low-resource settings. Although the need of institutional childbirths in these settings cannot be fully vetoed; evidence from this project as well as from around the globe suggests that institutional childbirths not necessarily mean quality or even safe childbirths (119,210–212). In light of the fact that all universal guidelines on safe childbirths mention only skilled birth attendance (not institutional births) to be necessary to avoid childbirth

related morbidity and mortality (4,213); home births with competent care providers such as trained midwives should also remain an option for women.

Methodological considerations

Methodologically, the overall research was strong due to its mixed-method approach. While the qualitative studies revealed some well-explored and some less-explored aspects of childbirth care, the quantitative studies helped in quantifying the services provided and the women's reactions to the services that they received. Involving two levels of health facilities – the Community Health Centres and the District Hospitals – meant that data came from relatively less busy as well as extremely busy labour rooms. Although the main focus of the study was to assess childbirth care in labour rooms, including women who had had caesarean births provided the opportunity to assess quality of care and differences between two scenarios. Including both women and their nurse-midwives opened opportunities to present a balanced description of childbirth care inside the labour rooms. Having family welfare counsellors participate helped to bring up sensitive issues such as abuse inside the labour rooms and women's rights and their violation. The findings were disseminated to the government and were received well on the whole.

However, this project was descriptive in nature and relied solely on the women's and their care providers' verbal responses, leaving a probability of response bias. An objective exploration, such as through the direct observation of said practices, would have conceptually established the accuracy of the findings, and the initial plan had incorporated this approach into design; however, several logistic and ethical problems resulted in the removal of this component from the study design.

Qualitative studies

The strengths and limitations of the qualitative studies, along with the strategies adopted to overcome those limitations related to the different aspects of this project, are discussed below.

Selection of the research approach

The study relied on the Grounded Theory methodology as it is often used to explore a phenomenon that has not been previously explored, and the data are novel enough to generate a generalisable model or a theory (214). The Corbin and Strauss (2008) methodology was adopted as it seemed to provide better

guidelines to remain closer to the raw data. However, it also leaves both the studies vulnerable to the common critiques – forcing the data into conceptual interpretation and a somewhat rigid handling of the data (214,215) – applicable to this approach.

Timing of data collection

The interview questions were built from the content of previously completed interviews, and their transcription and translation were fully completed by the researchers who performed the interviews to avoid ambiguity in the process. With the women, the interviews were performed within 7–28 days of giving birth and it is possible that women were still experiencing an uplift in their feelings in general when they responded, which in turn cast a more positive outlook among these women. Conducting the interviews in the women's homes where the women held no authority was a limitation; however, they seemed to have more freedom to speak at home compared to the hospitals; as seen during pilot interviews at both venues. To reduce distraction among the care providers during the FGDs, the investigator engaged the participants once they were off-duty. However, it is possible that participants could be tired or in a state not conducive for critical reflection and conversation.

Method of data collection

During the FGDs with care providers, the Primary Investigator took care to conduct the FGDs in a secluded room, and to ensure the anonymity of the participants. As some of the care providers were engaged in FGDs inside their own health facilities, it is probable that some responses were influenced due to a fear of being overheard by their non-participating colleagues. The participants also knew each other; and some may have suppressed their opposing view on a matter due to this.

Method of data interpretation

The Paradigm Model was used to analyse the qualitative study with women, as the women's accounts fit well with the parameters of the model: they revealed a sequence of events, which comprehensively provided the factors influencing their choices, the phenomena, human response to the phenomena as they experienced it, and the consequences. At the same time, the use of the Paradigm Model is criticised for making the findings somewhat more 'rigid'. However, triangulating the findings from all four studies using different methodology allowed the identification of the corroboration and discrepancies in the project's overall findings. In the study with care providers, a theoretical model was developed using the data itself. While this approach is in line with

Grounded Theory studies, there is a chance that by not applying an existing model, some information was prioritised less than others.

Scientific rigour

The Primary Investigator – a professional nurse-midwife from India – had pre-existing knowledge of how institutional childbirths take place in Indian health facilities. Bracketing this pre-existing knowledge was a challenge, and the investigator had to practise a non-provocative and scientific method of questioning to reduce bias. Five practice interviews were carried out, and all investigators reflected on the biasedness of the content, among other things. Data collection for the study commenced only after the interview technique was unbiased, at least consciously. The benchmarks of quality in qualitative studies: the credibility, conformability, transferability and dependability of the findings were tested through regular triangulation sessions with peers and with midwifery experts in India and abroad.

Quantitative studies

The strengths and limitations of the quantitative studies, and the strategies adopted to reduce these limitations, are presented in the following sub-sections.

Study rigour

To promote rigour, the optimum number of participants included in the study was statistically calculated to ensure generalisability of the findings, and the data collection team members had technical and practical knowledge of pregnancy and childbirth. Having consecutive sampling, and completing the data collection continuously, added to the rigour of this study. The Primary Investigator ran 4 pilot studies: to select appropriate questionnaires, to modify the selected questionnaires, to test the competency of the research assistants, and to test the feasibility of the consecutive sampling strategy and the logistics around the data collection over a large sample size. The data collection followed a rigorous method and was carried out under direct supervision of the primary investigator who herself collected data from 5% respondents, apart from supervising the RAs' work.

Selection of questionnaires

The use of standardised tools further improved the reliability of the data. The research team had previous experience of data collection through survey method, and the three questionnaires were selected after much reflection and

discussion among all investigators: EPDS, a very well-tested scale to screen for postnatal depressive symptoms, was the first to be selected, as it was already validated in *Hindi* and was freely available from the book 'Perinatal Mental Health: the EPDS Manual' (2nd Ed.).

Fear of Birth was selected as a study area because of the strong empirical evidence suggesting its association with depression and its relationship with satisfaction. Studying FoB was also relevant because no previous study had attempted to quantify prevalence of FoB in any part of India. A review of published information provided two options: The Wijma Delivery Experience Questionnaire (WDEQ), a 33-item questionnaire; and the Fear of Birth Scale (FOBS), which is a two-item scale assessing the respondents' *Fear* and *Worry* related to childbirth. After discussion, WDEQ was selected for use because: a) It was constructed to minimise response-bias; and, b) FOBS itself used WDEQ for establishing its convergent validity.

Regarding the assessment of women's satisfaction with services, the Quality from Patients' Perspective (QPP) instrument and the Mackey Childbirth Satisfaction Rating Scale were both translated and pilot tested by the Primary Investigator, but several items in both scales were more apt for well-equipped and staffed settings while being non-applicable (individual room with attached toilet etc.) in Indian public health facilities. Also, both questionnaires needed higher abstract thinking, and several items were not comprehensible by the target population in this study. SMMS, the Turkish scales, were more suitable for an Indian context, as demonstrated by the pilot testing.

Psychometric evaluation of WDEQ-B and SMMS scales

Except EPDS, none of the tools selected had been psychometrically tested and validated in India. As part of this study, an attempt was made to check for the psychometric properties of the scales selected, which adds to the study's strength. However, despite searching for psychometrically tested tools against which to assess the psychometric properties of our translated questionnaires, none could be located. Therefore, the investigation stopped with proving a divergent validity of the translated questionnaires against EPDS. This is one of the weaknesses of psychometric validation as carried out in this study. Both the translated WDEQ-B and SMMS were multidimensional in nature, which is in line with other studies that validated WDEQ (216,217). While the original authors claimed WDEQ to be a unidimensional scale (72); and recommend a cut-off calculation to discriminate severe FoB from 'normal' apprehension. The cut-off was used to differentiate between the respondents, however, recent evidence challenges applying a cut-off score to a multi-dimensional scale, recommending instead that result descriptions around each subscale are more apt. In this project, all analyses have used the recommended cut-off scores. ,

Method of data collection and interpretation

Interviews were conducted with survey respondents to collect data. While this gave equal opportunity for both literate and illiterate women to participate, it raised concern around the objectivity with which each RA posed the questions to the respondents. Conceptually, too much explanation, or different ways of explaining questions, created interviewers' bias. To control this confounder, the RAs and Primary Investigator worked out working definitions in *Hindi* for key words in each item in all three scales used, which was printed as a handbook, and carried by all of those who collected data so that it was readily available for use if the need arose. The accuracy of the handbook was also tested during the pilot tests; if the women failed to understand the word as well as its explanation from the handbook, more synonyms and simpler ways of explaining the synonyms were explored and incorporated into the handbook. Due to several known confounders around satisfaction with childbirth services; the Pragmatic Model of Patient Satisfaction in General Practice was adopted to interpret the findings. The pragmatic model was selected as it was developed to understand the phenomenon of satisfaction within the available context only, providing a scope to interpret our findings barring the socio-cultural confounders outside the scope of current project. At the same time, it can be argued that applying this model plays down the impact of several well-known confounders around satisfaction; providing a too simplistic interpretation of a complex phenomenon.

Timing of data collection

One concern around data collection was regarding its timing of the data collection. While EPDS is shown to accurately screen for postnatal depressive symptoms within 7 days of childbirth with strong relationship to women's mood 4 to 8 weeks postpartum (37,218), the authors of the original WDEQ-B recommend that it can be used any time after the birth to accurately identify FoB. Satisfaction with services is shown to change with time-lapse; however, following the survey participants to their homes after childbirth was outside the scope of this research with the available timeline and resources. Among the three responses, satisfaction scores are most probably the ones to have been influenced by data collection so close to having given birth; but these are still relevant within the scope of this project.

Regarding the postnatal depressive symptoms, the systematic reviews on their prevalence in LMIC settings suggest that depressive symptoms are often under-reported due to cultural diversity and the stigma attached to mental ill-health (93,219). Social aspects of depression, such as marital relationship, domestic abuse, gender disparity, level of poverty, and burnout among women were not explored during this study, which may have added another perspective on the factors that influence women's mental health.

Conclusion

In conclusion, the quality of childbirth care – when seen from the perspectives of women and their care providers – reveals a need for more sensitivity in the delivery of health care as well as towards the need of those who are providing care. Practices around perineal wound repair and childbirth abuse, although present and commonly practised, as suggested by this project’s findings, need closer investigation. The prevalence of FoB and depressive symptoms has associations with the management of childbirth: the type of facility; primary care providers; mode of delivery; and services received. The labour rooms seem to be functional based on the women’s accounts, but there is an urgent need for the improvement of interpersonal processes, information-sharing, and sensitive treatment of women seeking childbirth services in public health facilities. Women are apprehensive of operative procedures associated with childbirth, and experiencing an emergency caesarean section was found to have a close association with FoB in our quantitative study. Future health care reforms should aim to improve the interpersonal relationships and evidence-based care inside labour rooms to improve quality of care. Because this was the first study, to the best of Primary Investigator’s knowledge, to measure prevalence of FoB and level of satisfaction and to explore associations between depressive symptoms, FoB and satisfaction, more empirical evidence in different settings and groups is further recommended.

Summary in English

Having skilled care providers for childbirths has been globally promoted as it reduces preventable maternal and neonatal deaths and other childbirth related complications. In countries facing shortage of manpower and supplies, institutional childbirths have emerged as one solution to ensure every childbirth is attended by a skilled care provider. India, like other low and middle income countries, has promoted institutional childbirths through various national programmes and schemes over the past decade. The intervention has resulted in reducing the Maternal Mortality Ratio (MMR) from a staggering 580 in 1980s to under 170 in 2016. At the same time, institutional childbirths in India have grown from 33.6% in 1999 to above 80% institutional deliveries in 2011. With over 290 million Indians living under the poverty line (earning INR 816 per person per month in rural and INR 1000 per person per month in urban areas); Public health facilities are arguably the most utilised health facilities for institutional childbirths. This has resulted in excessive workload on public health institutions that still have limited manpower and material resources.

In public health delivery system, childbirth services are offered at Primary Health Centres (PHCs); usually six-bedded facilities also providing mainly promotive and preventive care as well as basic treatment for common illnesses. Community Health Centres (CHCs), the first referral centres in health care delivery system, usually are 30- 60 bedded health facilities that provide promotive preventive and curative care and have 30- 200 childbirths per month. Some CHCs may also offer caesarean birth facilities. District Hospitals are the referral centers for one district. Each district hospital provides promotive, preventive, and curative health services including services for normal and complicated vaginal births as well as caesarean sections. Nurse-midwives are the primary care providers for women in uncomplicated childbirths, whereas complicated childbirths and caesarean births are managed under obstetricians'/treating physicians' supervision.

Midwifery in India is merged with nursing education, and does not have a separate identity till date. The nurses working in labour rooms are not posted exclusively in labour rooms, but are rotated from ward to ward. In smaller health facilities, one nurse-midwife looks after multiple wards, including labour room.

Global research has explored women's expectations and experiences, mental health indicators like Fear of Birth (FoB) and Postnatal Depressive Symptoms (PND); level of satisfaction with services, childbirth-related violence to

understand quality of childbirth services and its relationships with different variables. Other studies across the world have explored different models, like bio-medical and midwifery-led models and their impact on quality of care; self-esteem and mental health of care providers and its impact on quality of services providers. While several studies in India have explored the policy perspectives of institutional childbirths and related schemes; very few studies have explored how Indian women experience childbirth services offered at these low resource settings; negligible scientific information is available on the mental health of Indian women who have experienced institutional childbirths; and no study has quantitatively explored the FoB and the level of satisfaction and factors associated with higher satisfaction among Indian women using a standardised questionnaire. A few studies have explored the nurse-midwives' experiences of providing childbirth services to women coming for institutional childbirths, but there is scope for further scientific exploration.

This PhD project was conceptualised and carried out to generate more scientific data on areas mentioned above. A mixed method approach – having both qualitative and quantitative studies – was adopted: the qualitative studies using grounded theory approach provided deeper understanding of quality of care during institutional childbirth as expressed by 13 women who had given birth to a single healthy newborn. Twenty seven care providers from the same health facilities where all the participating women gave births were also included in a separate study to explore their perspectives on quality of childbirth services. The quantitative study using cross-sectional survey explored presence of FoB; and PND among 1004 women (860 normal births; 144 caesarean births) having institutional childbirths as well as their satisfaction with childbirth services received. The data were collected in 2014- 2016 from two district hospitals and 15 CHCs, and in community around them in two districts of Chhattisgarh state. The WHO Framework for Quality Maternal and Neonatal Health Care was used to interpret the findings.

The results from this project showed that the health system existing around childbirth services was considered conducive for quality services by both women and their care providers: free transport to reach hospital and back for childbirth; free food, stay and treatment at the hospital; monetary incentive for having institutional childbirths were appreciated by the women and their families. In 80% cases, *Mitanins* (the community-level non-technical change agents) informed women about their rights and entitlements and motivated them for institutional childbirths. While maintaining updated records was considered an integral part of quality childbirth services by care providers, less than one-tenth of all women participating in survey had a completed partograph – a graphical record of progress of childbirth.

Exploration of childbirth services showed a mixture of evidence-based and non-evidence-based practices. While women were being motivated to maintain upright position and received simple food and water in early stages of

labour, old practices like perineal shaving and enema were reported to be abolished. Some malpractices were mentioned by both women and care providers such as: perineal wound repair without local anaesthesia (reported by two-thirds of all women having vaginal births); lack of privacy during childbirth (nine-tenths of women left exposed below-the-waist inside labour rooms); and almost two-thirds of the participants had had no privacy during breastfeeding. Incidence of verbal and physical abuse were mentioned by both women and their care providers, however, abuse during childbirth depended upon the care providers' personality according to the women. Care providers also mentioned incidents of abuse they experienced at the hand of family members. Nurse-midwives mentioned that they sometimes raised their voices to bring women's attention away from pain if they became uncooperative, but they opposed physical harm to women and mentioned stopping their colleagues who were seen using physical abuse. While care providers were aware of the evidence-based procedures, they several times had bent to meet the community expectations, which could sometimes be non-evidence-based such as demanding pain-enhancer injections.

Based on findings, prevalence of FoB (13.1%) and PND (17.1%) was comparable to global prevalence rates. FoB was commonly experienced by women who had given birth by Caesarean Section. Among women who had given vaginal births; FoB was more commonly experienced by women giving birth at District Hospitals; and by those who underwent perineal wound repair without local anaesthesia. PND was more commonly experienced if they had given birth to low birth weight neonates, and could not talk to the care providers in postnatal wards. Majority of the women were satisfied with the childbirth services they had received; however, women having caesarean births tended to have better odds to access basic facilities (bedside lockers etc.) and tended to be more commonly satisfied with services received compared to women who had vaginal births. Among women who had vaginal births; those who gave birth at CHCs were more commonly satisfied compared to those who gave birth at the District Hospital. Having opportunity to talk to the care providers had association with being satisfied with childbirth services received. Having opportunity to interact with care providers seemed to be more important to the women compared to physical infrastructure and material. The women seemed to have little expectation from institutional childbirth beyond surviving; and doing so may have positively influenced the findings.

There existed a strong gender dynamic and organisational hierarchy within the labour room which influenced all interactions between nurse-midwives and women; senior nurse-midwives and juniors; nurse-midwives and physicians; and nurse-midwives and the families. Also, there seems to exist a social stigma around being a nurse-midwives. Descriptions of the participating nurse-midwives also suggested that they considered they could have done 'better' professionally. Acute shortage of manpower (Study by A. Galhotra in

2012 in Chhattisgarh reports 3800 posts out of 5000 nurse-midwives are vacant) meant that the nurse-midwives were overworked, and acute shortage of resources left them dealing with several dilemmas such as choosing to care for someone sick, and whose needs were perceived to be higher compared to women in labour. Though the care providers strived to do their best for the women in their care, the stress often left them fatigued, disillusioned and demotivated.

To conclude, results from this project suggest that the quality of childbirth care is improving at a sustainable rate; however, the slow progress has produced several challenges for providing quality childbirth care. The care providers have their own work related challenges. Results suggest that there is a need to assess their mental health. It is also possible to further improve quality of institutional childbirth services if aspects such as human interaction; evidence-based pain-relief during childbirth and sensitive, respectful treatment of women are improved, in addition to infrastructure-related improvements.

हिंदी में सारांश

प्रसव तथा प्रसव-पश्चात माँ और नवजात शिशु में आ सकने वाली स्वास्थ्य-सम्बन्धी जटिलताओं या प्रसव सम्बन्धी कारण से माँ या शिशु की मृत्यु पर रोक लगाने के लिए विश्व भर में प्रसवकाल में कुशल कार्यकर्ताओं की उपस्थिति बढ़ाने हेतु प्रयास किये गए हैं। जिन देशों में मानवीय, भौतिक तथा तकनीकी संसाधनों की कमी है, वहाँ संस्थागत प्रसव-सुविधा उपलब्ध करवा कर हर शिशु जन्म के समय कुशल स्वास्थ्यकर्मों की उपस्थिति सुनिश्चित करने का तरीका अपनाया गया है। अन्य निम्न या मध्यम-आय वाले देशों की तरह भारत में भी पिछले दशक में संस्थागत प्रसव-सुविधाओं का प्रचार-प्रसार कई राष्ट्रीय योजनाओं तथा कार्यक्रमों के तहत किया गया है। इन प्रयत्नों के कारण भारत में मातृ मृत्यु दर अनुपात (MMR) में काफी गिरावट आयी है: १९८० के दशक के अति-उच्च ५८० से घट कर ये अनुपात अब १७० के नीचे जा चुका है। साथ ही साथ इन योजनाओं के चलते संस्थागत प्रसव-सुविधाएँ लेने वाली महिलाओं की संख्या भी तेजी से बढ़ी है। १९९९ के आंकड़ों के अनुसार, जहाँ केवल ३३.६ % महिलाएँ संस्थागत प्रसव हेतु स्वास्थ्य केंद्र आयीं, वहीं UNFPA संस्था की २०११ की रिपोर्ट अनुसार अनुमानित है कि उनके कार्यक्षेत्र में लगभग ८०% भारतीय महिलायें अब स्वास्थ्य केंद्र आकर संस्थागत प्रसव-सुविधाओं का लाभ उठा रही हैं। हालांकि भारत में, और छत्तीसगढ़ राज्य में भी, संस्थागत प्रसव तेजी से बढ़ा है; स्वास्थ्य केंद्र आज भी भौतिक, मानवीय और तकनीकी संसाधनों की कमी का सामना कर रहे हैं। पहले किये हुए विभिन्न शोध बताते हैं कि इस बढ़ती मांग और सीमित आपूर्ति के कारण प्रसव-सम्बन्धी स्वास्थ्य सेवाओं की गुणवत्ता पर भी असर पड़ा है।

अनुमानित है कि लगभग २९० मिलियन भारतीय आज भी गरीबी रेखा (ग्रामीण तथा शहरी इलाकों में क्रमशः ८१६ रुपये तथा १००० रुपये प्रति व्यक्ति प्रति माह से कम की आय) के नीचे रहते हैं। इस स्थिति में यह तर्क दिया जा सकता है कि यह जनसमुदाय सभी स्वास्थ्य सेवाएँ, जिसमें संस्थागत प्रसव-सुविधाएँ भी शामिल है, सरकारी स्वास्थ्य केंद्रों से मुफ्त या भारी छूट के साथ प्राप्त करता है, और सरकारी स्वास्थ्य केंद्र भारत में संस्थागत प्रसव-सुविधाएँ देने में सबसे आगे हैं। भारत में संस्थागत प्रसव-सुविधाएँ हर स्तर के सरकारी स्वास्थ्य केंद्र में उपलब्ध हैं: छ-बिस्तर वाला प्राथमिक स्वास्थ्य केंद्र (PHCs) प्राकृतिक प्रसव सुविधाओं के अलावा प्रोमोटिव एवं प्रिवेंटिव स्वास्थ्य सुविधाएँ प्रदान करता है; वहीं ३०-६० बिस्तरों वाला सामुदायिक स्वास्थ्य केंद्र (CHCs) प्राकृतिक प्रसव सुविधाओं के अलावा प्रोमोटिव, प्रिवेंटिव एवं क्यूरेटिव स्वास्थ्य सुविधाएँ प्रदान करता है। कुछ CHCs सीजेरियन प्रसव की सुविधाएँ भी प्रदान करते हैं। CHCs सरकारी स्वास्थ्य प्रणाली में प्रथम परामर्श (रेफरल) केंद्र भी होते हैं। जिन स्वास्थ्य समस्याओं का निदान करने में CHCs अक्षम रहें, वे जिला अस्पताल भेज दिए जाते हैं। १००-५०० बिस्तरों वाले जिला अस्पताल किसी भी जिले में स्वास्थ्य सुविधा देने वाले सर्वोच्च सरकारी अस्पताल हैं, और प्रसव-सम्बन्धी हर जटिलता के निवारण में लगने वाली तकनीकी सुविधा, जिसमें सीजेरियन सुविधा भी शामिल है, से लैस हैं। नर्स-मिडवाइव्स जहाँ प्राकृतिक प्रसव में महिला की देखभाल करने वाली प्राथमिक स्वास्थ्यकर्मी होती हैं, वहीं जटिल प्रसव में देखभाल प्रसूति विशेषज्ञ या सामान्य चिकित्सक के पर्यवेक्षण में दी जाती है।

भारत में मिडवाइफरी की शिक्षा नर्सिंग की शिक्षा दौरान ही दी जाती है तथा भारत में आज तक मिडवाइफरी को एक संव्यवसाय (प्रोफेशन) का दर्जा नहीं दिया गया है। किसी भी स्वास्थ्य केंद्र में काम करने वाली नर्स-मिडवाइव्स स्थायी रूप से एक वार्ड में नहीं कार्य करतीं, बल्कि उनको नियत रूप से एक समयावधि के बाद दूसरे वार्ड में पोस्ट किया जाता है। कई छोटे स्वास्थ्य केंद्रों में एक नर्स-मिडवाइफ अनेक वार्डों में स्वास्थ्य सेवाओं हेतु जिम्मेदार होती है, जिसमें प्रसव कक्ष भी शामिल हैं।

विश्व भर में संस्थागत प्रसव-सुविधाओं की गुणवत्ता और विभिन्न कारकों का इस गुणवत्ता पर पड़ने वाले प्रभाव के आकलन हेतु कई शोध हुए हैं, जैसे कि महिलाओं की संस्थागत प्रसव से अपेक्षाएँ, उनके अनुभव, उनके मानसिक स्वास्थ्य के प्रसव-सम्बन्धी डर और प्रसव-पश्चात होने वाले अवसाद जैसे सूचक, प्रसव-सुविधाओं प्रति उनके संतोष का स्तर,

प्रसव-दौरान महिलाओं के साथ दुर्व्यवहार इत्यादि. भारत में ज्यादातर शोध प्रसव-सुविधा-नीतियों का अवलोकन करते हैं. बहुत कम ऐसे शोध भारत में हुए हैं जो कि संस्थागत प्रसव-सुविधाएँ लेने वाली महिलाओं से, और उनको सेवा देने वाली स्वास्थ्यकर्मियों से उनके अनुभव और विचार पर मनन करते हैं. इसके अलावा, संस्थागत प्रसव-सुविधाएँ लेने वाली भारतीय महिलाओं के मानसिक स्वास्थ्य पर भी बहुत ही कम शोध हुआ है, और अनुमानतः किसी दूसरे शोध में संस्थागत प्रसव-सुविधाएँ लेने वाली भारतीय महिलाओं में प्रसव-सम्बन्धी डर, और मिली सुविधाओं प्रति संतोष को एक मानक स्केल पर नहीं नापा गया है. बहुत ही कम ऐसे शोध हुए हैं जो कि संस्थागत प्रसव सुविधाएँ देने वाले स्वास्थ्य कर्मियों के अनुभवों की पड़ताल करते हैं, और इस क्षेत्र में और वैज्ञानिक कार्य की बहुत संभावनाएँ हैं.

यह PhD प्रोजेक्ट उपरोक्त क्षेत्रों पर और वैज्ञानिक जानकारी पैदा करने के लिए अवधारित किया गया. जानकारी पैदा करने के लिए एक मिश्रित विधि, जिसमें गुणात्मक और मात्रात्मक दोनों प्रकार के शोध शामिल थे, का प्रयोग किया गया: गुणात्मक शोध में 'ग्राउंडेड थ्योरी' नामक विधि का इस्तेमाल करते हुए सरकारी स्वास्थ्य केंद्रों में एक स्वस्थ शिशु को जन्म देने वाली माताओं; और सत्ताईस स्वास्थ्य कर्मियों से शोध-जानकारी (डाटा) ली गयी. वहीं मात्रात्मक शोध में क्रॉस-सेक्शनल सर्वेक्षण द्वारा सरकारी अस्पतालों में भर्ती, एक स्वस्थ नवजात को जन्म देने वाली १००४ माताओं (जिनमे से ८६० ने प्राकृतिक तरीके से जन्म दिया और १४४ ने सीजेरियन जन्म दिया और सीजेरियन के बाद कोई नयी जटिलता का सामना नहीं किया) से आठ सर्वेक्षण-कर्ताओं (RA's और मुख्या जांचकर्ता) ने इंटरव्यू तकनीक का इस्तेमाल करके हिंदी-अनुवादित और मूल्यांकित मानक स्केल्स का इस्तेमाल करते हुए डाटा जमा किया. ये मानक स्केल्स महिलाओं में प्रसव-पश्चात प्रसव-सम्बन्धी डर; प्रसव-पश्चात अवसाद; और दी गयी प्रसव सुविधाओं के प्रति माताओं के संतोष को नापती थीं.

यह डाटा छत्तीसगढ़ राज्य के दो जिलों के सरकारी स्वास्थ्य केंद्रों (दो जिला अस्पताल और १५ CHCs) में वर्ष २०१४- २०१६ के बीच जमा किया गया. समस्त जमा की गयी जानकारी को व्यवस्थित और निरपेक्ष रूप से समझने के लिए विश्व स्वास्थ्य संगठन (WHO) द्वारा दिए गए 'माता और शिशु को मिली स्वास्थ्य-सम्बन्धी देखभाल की गुणवत्ता' नामक तंत्र (फ्रेमवर्क) का इस्तेमाल किया गया.

इस शोध के परिणाम यह बताते हैं, कि महिलाओं और स्वास्थ्यकर्मियों के अनुसार भारतीय सरकारी अस्पतालों में संस्थागत प्रसव सेवाएँ प्रदान करने के लिए एक अच्छी स्वास्थ्य प्रणाली, जो कि गुणवत्ता वाली स्वास्थ्य सुविधाओं हेतु जरूरी है, बन चुकी है. उदाहरण के लिए, संस्थागत प्रसव हेतु आने वाली महिलाओं को मुफ्त आवागमन के लिये एम्बुलेंस; अस्पताल में मुफ्त ठहरने और खाने की सुविधा; और संस्थागत प्रसव होने पर सरकार द्वारा दिया जाने वाला आर्थिक प्रोत्साहन महिलाओं और स्वास्थ्य कर्मियों द्वारा प्रशंसित है. वहीं ८० फीसदी मामलों में मितानिन (छत्तीसगढ़ में ज्यादातर ग्रामीण और कुछ शहरी इलाकों में महिलाओं को संस्थागत प्रसव के तकनीकी लाभ और महिलाओं को मिलने वाले फायदों के बारे में जानकारी देने वाली गैर-तकनीकी, सामुदायिक-परिवर्तन-कार्यकर्ता) महिलाओं के संस्थागत प्रसव हेतु आने का सबसे बड़ा कारण हैं. हालांकि स्वास्थ्यकर्मियों की जाने वाली सेवाओं का लिखित रिकॉर्ड रखने को संस्थागत प्रसव-सेवाओं का एक मूलभूत भाग मानते थे; सर्वेक्षण में भाग लेने वाली लगभग ९० फीसदी महिलाओं के मेडिकल रिकॉर्ड में पार्टोग्राफ-नामक प्रसव-प्रगति पर नज़र रखने में मददगार रिकॉर्ड अधूरा था, या नहीं बनाया गया था.

महिलाओं को दी जाने वाली सेवाओं की वैज्ञानिक वैधता पर पूछताछ करने से सामने आया, कि स्वास्थ्य केंद्रों में वैध और अवैध सेवाओं का मिश्रण मौजूद था. बहुत सी वैज्ञानिक रूप से अवैध और हानिप्रद सेवाएँ, जैसे कि प्रसव पूर्व जननांग की शेविंग और मल-द्वार से दिया जाने वाला एनीमा, अब पूर्णतया बंद हो चुकी थीं. साथ ही महिलाओं को शुरुआती प्रसव दौरान सादा खाना और पानी दिया जा रहा था जो ऊर्जा हेतु जरूरी है. स्वास्थ्य-कर्मी, महिलाओं को लिटा कर रखने की बजाय बैठने या चलने-फिरने को प्रोत्साहित कर रहे थे, जो प्रसव-प्रगति को प्राकृतिक रखने में सहायक है. वहीं दूसरी ओर कुछ वैज्ञानिक या मानवीय रूप से अवैध प्रक्रियाएँ भी प्रसव कक्ष में हो रही थीं, जिनक ब्यौरा महिलाओं और स्वास्थ्य-कर्मियों, दोनों ने दिया:

महिलाओं ने बताया कि प्राकृतिक प्रसव दौरान जननांग के फट जाने या चीरा दिए जाने की स्थिति में सर्वेक्षण में भाग लेने वाली दो-तिहाई महिलाओं को बिना किसी सुन्न करने की दवा के टॉके दिए गए. अधूरे रिकॉर्ड के कारण इस घटना पर लिखित जानकारी उपलब्ध नहीं है, परन्तु स्वास्थ्यकर्मियों ने भी ये माना कि एक-दो टॉके के लिए, या महिला के सुन्न करने वाली दवा प्रति संवेदनशील होने पर सामान्यतया क्षेत्र को बिना सुन्न किये टॉके दे दिए जाते हैं. नौ-दहाई महिलाओं को सार्वजनिक प्रसव-कक्ष या सीजेरियन तैयारी कक्ष में कमर से नीचे निर्वस्त्र रखा गया; और दो-तिहाई महिलाओं ने कहा कि सामूहिक वार्ड होने के कारण नवजात को दूध पिलाते समय में उनको मनमुताबिक एकांत नहीं मिला. हालांकि महिलाओं का मानना था कि

स्वास्थ्यकर्मियों का उनके प्रति व्यवहार स्वास्थ्यकर्मियों के व्यक्तित्व पर निर्भर था, और ज्यादातर स्वस्थ कर्मी अच्छे थे, पर बहुत सी महिलाओं ने प्रसव दौरान मौखिक और शारीरिक ताड़ना झेलने का भी खुलासा किया. स्वास्थ्यकर्मियों ने बताया कि कभी कभी महिलाओं से भीषण दर्द के दौरान सहयोग न मिलने पर तेज आवाज इस्तेमाल करके महिला का ध्यान केंद्रित किया जाता था, पर अपने कुछ सहयोगियों द्वारा महिलाओं पर हाथ उठाने का वे भी विरोध करते थे और वे ऐसा व्यवहार रोकने का प्रयास करते थे. स्वास्थ्यकर्मियों ने खुलासा किया कि कुछ महिलाओं के परिवार वाले स्वास्थ्यकर्मियों, खासकर नर्स-मिडवाइव्स, से गाली-गलौज करते थे और परिवार की अपेक्षा मुताबिक - और ये अपेक्षा वैज्ञानिक रूप से गलत भी हो सकती थी, जैसे तेज दर्द लाने के इंजेक्शन - सेवाएं ना देने पर शारीरिक चोट का खतरा भी अक्सर रहता था. बहुत बार सही जानकारी होने पर भी स्वास्थ्यकर्मियों को अपनी सुरक्षा के लिए मांगी गयी सेवाओं के सामने झुकना पड़ता था.

इस शोध के आंकड़ों के १३.१ % महिलाओं में प्रसव-सम्बन्धी डर; और १७.१ % महिलाओं में प्रसव-पश्चात अवसाद के लक्षण थे, जो कि वैश्विक आंकड़ों से मेल खाते हैं. सीजेरियन से जन्म देने वाली महिलाओं में प्रसव-सम्बन्धी डर होने के ज्यादा मौके थे, वहीं प्राकृतिक रूप से जन्म देने वाली जिन महिलाओं ने जिला अस्पताल में जन्म दिया और जिनको बिना सुन्न किये जननांग पर टाँके दिए गए, उनके अंदर ये डर होने की ज्यादा संभावना थी. जिन महिलाओं ने कम-वजन के नवजात को जन्म दिया या जिनको प्रसव-पश्चात वार्ड में स्वास्थ्यकर्मियों से बात करने का मौका नहीं मिला, उनमें अवसाद के लक्षण मिलने की ज्यादा संभावना थी. अधिकतर महिलायें प्रसव-दौरान मिली स्वास्थ्य-सेवाओं से संतुष्ट थीं, हालांकि सीजेरियन से जन्म देने वाली महिलाओं में संतुष्ट होने की आवृत्ति प्राकृतिक जन्म देने वाली महिलाओं से ज्यादा थी. वहीं CHC में प्राकृतिक जन्म देने वाली संतुष्ट महिलाओं की आवृत्ति, जिला अस्पताल में प्राकृतिक जन्म देने वाली संतुष्ट महिलाओं की आवृत्ति से ज्यादा थी. परिणामों से प्रतीत होता है कि स्वास्थ्यकर्मियों से बात कर पाना महिलाओं के संतोष हेतु भौतिक सुविधाओं से ज्यादा जरूरी है. महिलाओं में संस्थागत प्रसव से बहुत कम अपेक्षा - जन्म पश्चात माता और शिशु जीवित हों और प्रसव जल्दी निपट जाये - रखी गयी लगती है; और ऐसा हो जाने पर ज्यादातर महिलाएँ और कुछ न भी मिलने पर संतुष्ट लगती हैं.

परिणामों से यह भी प्रतीत होता है कि संस्थागत प्रसव सेवाएँ भी सामाजिक और सांस्कृतिक लैंगिक शक्ति-सम्बन्धी भेदभाव से परे नहीं है. प्रसव-कक्ष ने अंदर एक अनम्य पदानुक्रमिक (रिजिड हाइरार्की) माहौल था, जिसकी छाया स्वास्थ्यकर्मियों और महिलाओं के आदान-प्रदान पर; सीनियर और जूनियर स्वास्थ्यकर्मियों के बीच के आदान-प्रदान पर; चिकित्सकों और नर्स-मिडवाइव्स के बीच के आदान-प्रदान पर; और स्वास्थ्यकर्मियों और महिला के परिवार वालों के बीच के आदान-प्रदान पर पड़ती मालूम होती है. ऐसा लगता है कि नर्सिंग-मिडवाइफरी आज भी सामाजिक रूप से ओछी नजर से देखी जाती हैं, यहाँ तक कि शोध में भाग लेने वाली नर्स-मिडवाइव्स का भी ये मानना था कि वो शायद नर्सिंग से 'बेहतर' प्रोफेशन का चुनाव कर सकती थीं. इस शोध के नर्स-मिडवाइव्स का ये भी मानना था कि नियुक्त नर्स-मिडवाइव्स की संख्या बहुत कम थी (अ. गल्होत्रा द्वारा २०१२ में छत्तीसगढ़ में किये शोध मुताबिक ५००० नर्सिंग पोस्ट में से लगभग ३८०० खाली हैं), जिसके कारण उनपर भीषण कार्यभार था, और उन्हें अक्सर मरीजों और प्रसव में आयी महिलाओं के बीच ज्यादा जरूरतमंद का चयन करने जैसी ढेरों मौलिक उलझनों का पल-पल सामना करना पड़ता था. सुधार की धीमी दर और ये ढेर सारी चिंताएं अक्सर बेहतर से बेहतर सुविधा देने हेतु प्रेरित स्वास्थ्यकर्मियों को भी निढाल, और निराश छोड़ देती थीं.

निष्कर्ष में, इस शोध में भाग लेने वालों के अनुसार छत्तीसगढ़ के सरकारी अस्पतालों में संस्थागत प्रसव-सेवाओं की गुणवत्ता लगातार, पर धीमी गति से, बढ़ रही है. और इस कारण गुणवत्ता को बना कर रखने में कई प्रकार की रुकावटें हैं. स्वास्थ्यकर्मियों की अपनी अलग चुनौतियां हैं; और महिलाओं की ही नहीं, बल्कि स्वास्थ्यकर्मियों के भी मानसिक स्वास्थ्य पर शोध आवश्यक है. इसके साथ ही प्रसव दौरान मानवीय आदान-प्रदान, महिलाओं के साथ अच्छा व्यवहार और समयोचित दर्द-निवारण उपलब्ध करवाने से मौजूदा संस्थागत प्रसव-सेवाओं की गुणवत्ता में और सुधार संभव है.

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