

Women's Level of Satisfaction with Maternal Health Services in Jharkhand

Findings from the Quantitative Study

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Executive Summary

Background

The health of women worldwide is important not only to the women themselves, but their newborns, immediate family and the nation as a whole. Maternal health has therefore become an important aspect of policy and planning for healthcare, as reflected by it being the focus of the fifth Millennium Development Goal (MDG).

Worldwide, almost 300 million women die yearly due to pregnancy and childbirth related events with an additional 300 million women said to be suffering from long-term or short-term illness brought about by pregnancy or childbirth.

India may make its MDG target for a 75% decrease in national MMR by 2015, but some states still have a high burden of maternal deaths. The state of Jharkhand has a MMR of 261, compared to the national average of 212.

Improving utilization of antenatal care (ANC) services and institutional delivery services is seen as a vital approach to achieving greater reductions in maternal mortality. The UNICEF Coverage Evaluation Survey for Jharkhand in 2009 showed that only 11% of women in the state who delivered during the 12 months preceding the survey received full ANC, an improvement from 7% in the 2005 survey but still below the national average of 27% and certainly below the national goals for ANC utilization. The 2009 survey also revealed 40% institutional deliveries in the state, still below the national average of 73% but up from the 2005 percentage of 30. Utilization of institution-based maternal health services in Jharkhand is low owing to factors such as the perception that such services are unnecessary, high costs, and perception of poor quality of services among others. Hence, satisfaction with care has become critical to utilization of health services and likewise, the Janani Surasksha Yojana (JSY) scheme has become important in this respect.

Very few studies focusing on India have been published about women's satisfaction with maternal health services. This study is therefore designed as research into women's perceptions of quality and satisfaction with maternal health care.

Objective

The overall objective of the study was to identify the determinants of satisfaction and women's perception of quality for maternal health care services and to estimate the current level of satisfaction with maternal healthcare services in the context of JSY in the state of Jharkhand, India.

Methodology

The community survey was conducted in Jamtara District, in April and May 2012. It was a cross sectional study of postpartum women who delivered in the last three months preceding the survey using a structured questionnaire to gather information from the participants. The questionnaire



consisted of two parts: i) a questionnaire to understand the level of satisfaction for maternal health services. ii) an evaluation of maternal satisfaction with delivery care scale.

Results

The age of the respondents ranged from 18 to 40 years with more than half of the women (52%) in the age group of 19 to 24 years. Hinduism was the dominant religion while Other Backward Classes, Scheduled Castes and Scheduled Tribes together constituted about 80% of the surveyed women. 54 percent respondents had no formal education. Joint family was the dominant family type with mean household size of 7.4. Almost 90% of women with home delivery had average monthly income of less than INR 5,000, against 82% of those with institutional delivery. The mean number of pregnancies for women who had a home delivery was 2.7, which was higher than that for women who had an institutional delivery (2).

Overall, out of 500 women surveyed, 210 had institutional deliveries, representing less than half of the sample. Three-quarters of institutional deliveries were intentional and more than three-quarters (77%) of home deliveries were also intentional. The major reasons for initial preference for institutional delivery were the perception of getting better pregnancy outcome with institutional delivery than with home delivery, awareness of the JSY scheme, influence of ASHA on decision and husband/family decision. High cost of access to institutional delivery and close proximity of Dai were among the major reasons among women who initially intended to deliver at home, among several reasons cited. Concerning women who unintentionally delivered at home despite initial preference for institutional delivery, the most common primary reasons were that the delivery was unexpected and there was no time to reach the institution, mentioned by almost three-quarters (72%) of the women; absence of male or other family members to help arrange transport and lack of available transport. The primary reason for women who initially intended home delivery but ended up delivering in an institution was because they developed a complication.

Satisfaction levels were lower in women who had home births than those who had delivered at the institution. But in both the groups of women the satisfaction levels were lower among those women of relatively lower socio-economic status.

For those who expressed a willingness to choose institutional deliveries in the future, major reasons among those who had had previous institutional delivery were availability of 'good supplies' (39%), perceived health benefits for mother and baby (25%), good care from providers at the institution (16%) and reasonable cost (12%). Similarly, among those with previous home delivery, 'good supplies' was the most common primary reason (40%). For those not willing to deliver in a facility in the future, the most common primary reasons among women with previous institutional delivery was poor supplies (29%) and 'too expensive' (24%), followed by 'poor accessibility', 'poor structure' and 'poor care by providers'. Among women with previous home delivery, poor accessibility of facility (24%), poor supplies and 'too expensive' (16% each) and 'poor care from providers' (14%) were the most common primary reasons

Discussion



The results show that the major barriers to institutional delivery where there was initial intention to have an institutional delivery are transportation and time-related reasons. This calls into question the amount of birth preparedness the women had, as proper planning and knowledge of early labor signs should have taken care of this. On the other hand, opting for home delivery due to easier access to a Dai is an important factor in women who initially intended home delivery suggesting that access remains a key issue irrespective of the level or status of the care provider. Comfort and privacy also mattered to the women and tilted them into preference for home delivery. The JSY scheme, thought to cushion the effect of the financial burden of institutional delivery, plays a significant role in determining initial and future preference for institutional delivery and eventual satisfaction with the entire delivery process. The results also suggest the importance of making arrangements for someone to look after other children at home in case of sudden onset of labor as this emerged a strong reason keeping women from going to institutions for delivery. Family/husband decisions also mattered a lot although it was not clear from this study whether the women had different preferences from their husbands or other family members for place of delivery. Perceptions about the quality of care are also very important in determining future use of institutional delivery services.

The findings that satisfaction levels were generally higher among women of relatively higher socioeconomic status and lowest in the lower socio-economic status somewhat vary from findings in previous studies wherein higher socio-economic status women have expressed lower satisfaction. Also, the higher overall satisfaction with institutional delivery compared to home delivery is contrary to our initial thoughts that women opted for home delivery because they found it more satisfactory. This may turn attention to the elimination of barriers to institutional delivery.

Women's expectations are also key determinants of satisfaction, therefore exploring what they want from their care providers will give pointers to areas that need more looking into during programme or policy planning.

Recommendations

Our recommendations are to improve birth preparedness, improve emergency transport services and public transport and communication networks; also to address community fears regarding institutional deliveries and ensure better interpersonal care, making institutions more user-friendly and properly educating providers on the topics they discuss during counselling. Others are to improve privacy and emotional support during institutional deliveries, put a curb on buying medicines, conducting tests and informal payments at the institution, and expanding the JSY coverage. Also importantly, supporting TBAs in their role in maternity care is important in regions like Jharkhand where home deliveries cannot be totally eliminated in the near future and as such the role of TBAs will remain important. Others are quality assurance at institutions and ensuring the continuum of care.

Conclusion

A lot still needs to be done towards improving the utilization of institutional services in Jharkhand and ensuring women receive the quality of care they desire and actually need, will make a difference. Efforts at eliminating barriers to institutional deliveries are to be stepped up and wider application of the findings of this study throughout India should be explored.



1. INTRODUCTION

1.1 STUDY OBJECTIVE

The overall objective of the study is to identify the determinants of satisfaction and women's perception of quality for maternal health care services and to estimate the current level of satisfaction with maternal healthcare services in the context of JSY in the state of Jharkhand, India

1.2 STUDY FRAMEWORK

The research is divided into three components, explained in detail in figure 1.2:

1.2.1 The literature review: This explored various methodologies used in assessing women's perceptions of quality and satisfaction with maternal care and key determinants of maternal satisfaction. The review covered India and other developing countries, especially those which might have schemes similar to JSY. Particular efforts were made to identify gray literature from India and Jharkhand.

The specific objectives were:

- I. To determine the various methods used in analyzing maternal satisfaction with care in terms of quality in developing countries.
- II. To determine which of these are the most promising methods that can be applied in India
- III. To identify the determinants of maternal satisfaction emerging from the literature.

1.2.2 The Qualitative Study: Here, in-depth interviews and focus-group discussions with recently delivered women and with service providers in Jamtara district of Jharkhand were used to explore the determinants of care for institutional and home births across continuum of care and understand women's perception of good care.

The specific objectives were:

- I. To understand determinants of care for institutional and home births across continuum of care.
- II. To understand women's perception of good care

1.2.3 The Community Survey: Based on the key themes on determinants of care that emerged from the literature review and qualitative study, the third component - helped to determine the level of satisfaction for maternal health services in one district in state of Jharkhand.

The specific research questions were:

- What aspects of care do matter to the women in Jharkhand related to maternal health services and which aspects of care are most important for participating in public programs and schemes providing antenatal, intrapartum and postpartum services?
- What is the status of satisfaction with maternal health care services provided and what are the differentials that exist between institutional and home deliveries?



- Has women’s perceptions of quality and/or dissatisfaction with services influenced their decisions to utilize maternal health care services?
- How do socio-economic and cultural factors influence patient’s perceptions of QoC and satisfaction with maternal health services?

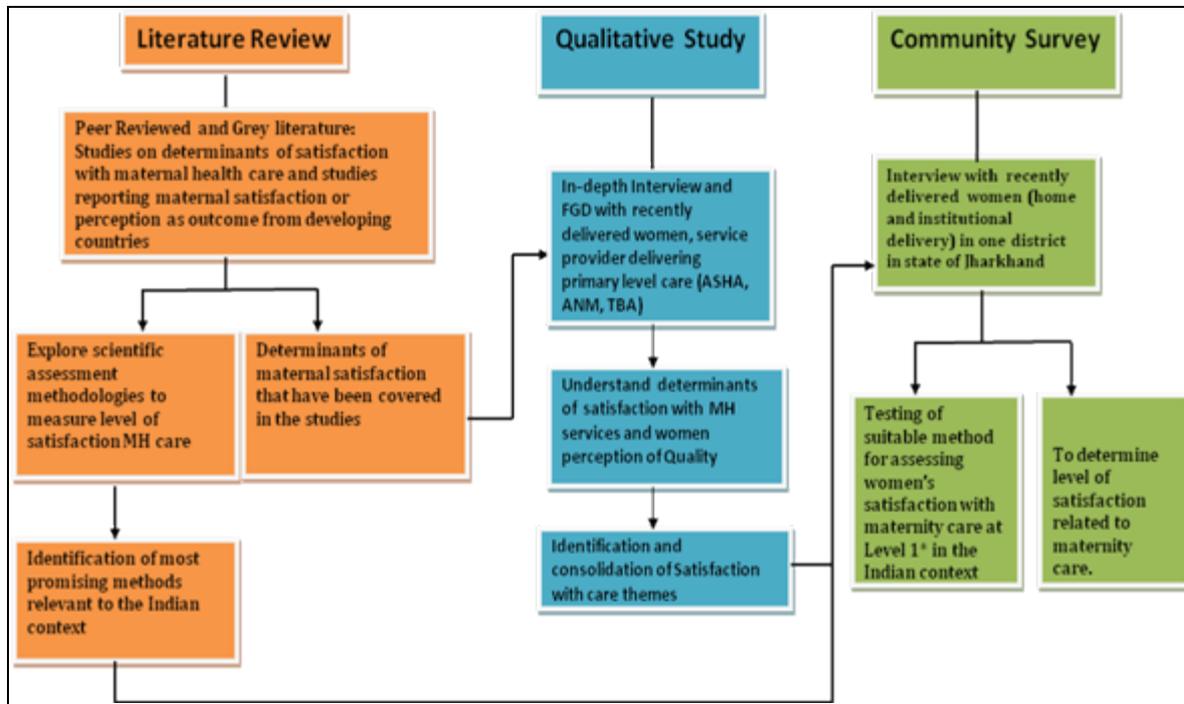


Figure 1.1: Activities Framework

1.3 BACKGROUND

1.3.1 Global Maternal Health Situation

The health of women during pregnancy, delivery and the postnatal period is important not only to the individual women requiring maternity care, but to her newborn and immediate family as well as national and global development (Kumar & Singh, 2007). Maternal health has therefore become an important aspect of policy and planning for healthcare, as reflected by its inclusion as the fifth Millennium Development Goal (MDG); This aims to improve maternal health, targeting a reduction in maternal mortality ratio (MMR) by 75% between 1990 and 2015 and achieve universal access to reproductive health by 2015 (WHO et al., 2012).

Worldwide, almost 300 million women die yearly due to pregnancy and childbirth related events. An additional 300 million women were said to be suffering from long-term or short-term illness brought about by pregnancy or childbirth as per estimates for 2005. About 99% of maternal deaths occur in developing countries. Sub-Saharan Africa and Southern Asia account for up to 85% of maternal deaths; with India alone accounts for nearly a fifth of the global maternal mortality burden [WHO et al., 2007; WHO et al., 2012].



1.3.2 India

India's maternal mortality ratio (MMR) has been falling over the years from 600 per 100,000 live births in 1990, to 480 in 1995, 390 in 2000, 280 in 2005 to 212 as of 2010 (WHO et al., 2012). However, India is still far from achieving the national socio-demographic goal of decreasing its MMR to less than 100 by 2010 (National Population Policy, 2000) or the MDG target of 75% decrease by 2015.

In view of this, the government of India has remained committed to safe motherhood as various programs and policies have been put in place over the years. Some examples are The Child Survival and Safe Motherhood Program (1992), Reproductive and Child Health Program (1997), National Population Policy (2000), National Rural Health Mission (2005-12) (Khan & Pradhan, 2011) and notably, The Janani Suraksha Yojana scheme (JSY), a conditional cash transfer scheme to improve the Infant Mortality Rate (IMR) and Maternal Mortality Rate (MMR) by promoting Institutional delivery, which was introduced in 2005.

1.3.3 Jharkhand

The state of Jharkhand is a newly formed state which came into existence on 15th November 2000. According to Census 2011, Jharkhand's population was 33.0 million with 76% of the population residing in rural areas (Registrar General and Census Commissioner, 2012). Female literacy was 56% in the State. Rural urban divide was high with regard to female literacy as 50% females were literate in rural areas compared to 76% in urban areas.. National Family Health Survey, 2005-06 reveals that more than half of households in Jharkhand (52%) fall in the lowest wealth quintile, while only one-third of households fall in the top three quintiles. About 63% of women aged 20-24 years get married before 18 years, which is the minimum legal age at marriage in the country. Total fertility rate is 3.3 children; and among women aged 15-19, more than one-quarter (28%) have already begun childbearing. The median interval between births is 32 months. Less than one-third (31%) of the currently married women aged 15-49 are using any modern contraceptive method while almost a quarter (23%) have an unmet need for contraception. Jharkhand is one of the poorest states in the country with low per capita income and 54% of the population living below the poverty line (IIPS & Macro International, 2007). Jharkhand has an MMR of 261, compared to the national average of 212 (Registrar General of India, 2009).

1.3.4 Maternal Health Services and Initiatives in Jharkhand

Simultaneously with national policies and programs, the Department of Health and Family Welfare, Government of Jharkhand has taken some fundamentally strong initiatives to help bring about a change in maternal and child health indicators. The 'Catch up' round is one such initiative which has helped decrease the Infant mortality rate (IMR) and improve maternal mortality rate (MMR) indicators. The Mukhya Mantri Janani Swasthya Suraksha Yojana (MMJSSY), is the equivalent of the JSY program and was introduced in the state in 2005. Other efforts by the Jharkhand government in particular, in addition to the maternal health components of various national and state level programs, include the posting of doctors to rural health centers on contract basis (doctor-population ratio 58:100,000 with most doctors located in urban areas (Kumar & Singh, 2007)); building of labor rooms; and the enhancement of the health budget (Barnes, 2007). The organization of medical care in Jharkhand is shown in the figure below.



Principal Staff for Maternal Care

Specialist Doctors/Paramedical

CMO/MO/Nurses/ANM/LHV/Pharmacists/Lab Tech

Doctors/Nurses/LHV/Paramedical

Doctors/ANM/Compounder/Dresser

MMW/ANM

Source: Kumar & Singh, 2007

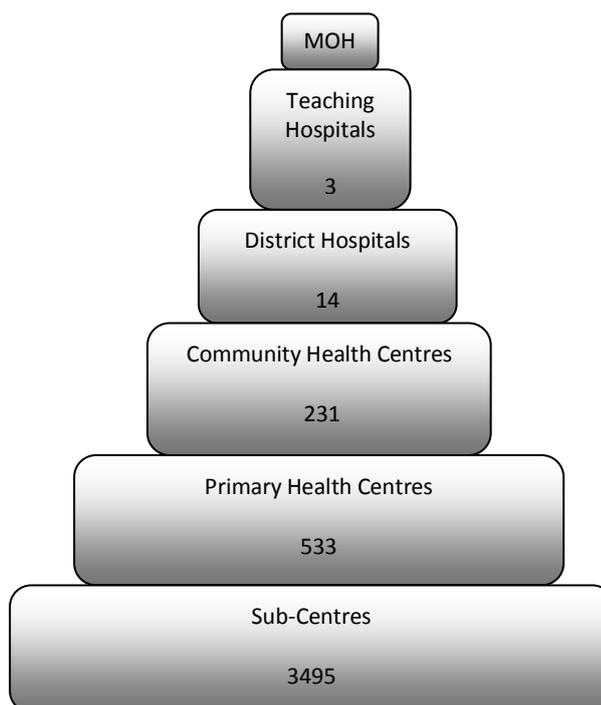


Figure 1.2: Organisation of Medical Care in Jharkhand

1.3.5 Utilization of Maternal Health Services

Increasing the rate of antenatal care (ANC) attendance and institutional deliveries is seen as a vital way of making grounds on the reduction of maternal mortality in such regions and therefore the utilization of maternal health services by women is an important issue to be explored if indicators are to be improved upon. Jharkhand still lags behind most other India states in the percentage of ANC attendance and institutional deliveries, although gains have been made in recent years.

The UNICEF Coverage Evaluation Survey for the State in 2009 showed that only 11% of women in the state who delivered during the 12 months preceding the survey received full ANC, an improvement from 7% in the 2005 survey but still below the national average of 27%. The 2009 survey also revealed 40% institutional deliveries in the state, below the national average of 73% but up from 30% reported for the state in 2005. These and some other statistics from the 2009 coverage evaluation survey are represented in the table below.

Table 1.1 Some Maternal Health Services Indicators in Jharkhand and Rest of India

Indicator	Jharkhand			India		
	Total	Rural	Urban	Total	Rural	Urban
Full Antenatal Check up	10.9	9.8	14.7	26.5	22.8	36.1
Institutional Delivery	40.1	30.6	73.3	72.9	68.0	85.6
Skilled Attendant	47.3	39.0	76.5	76.2	71.7	87.9
Up to 48hrs post-delivery stay in health facility	37.8	-	-	54.9	-	-

Source: UNICEF coverage evaluation survey 2009



1.3.6 Factors Associated with Utilization of services in Jharkhand

Despite the efforts made by the Jharkhand government to improve healthcare provision in the state, infrastructure is still reportedly insufficient, along with difficult geographic terrain, poor socio-economic status of the population and low literacy levels. These factors have affected the utilization of maternal health care services by women in the state. A study in Jharkhand by Nagdeve (2008) highlighted specific reasons why women did not access these services. Prominent among the reasons for non-ANC attendance was the perception that ANC was not necessary - 49% of women (average for all districts of the state) reported this with the figure as high as 78% in the Dhanbad district. The next most common reason was the high costs (20%) and then lack of knowledge (12%). Other reasons included distance of facilities/lack of availability of transport, family decisions, cultural reasons and lack of time. Two percent reported poor quality of services as their main reason for not utilizing ANC. The pattern was generally the same for choice of place of delivery with 52% of women reporting that institutional delivery was unnecessary; 11% of women felt they would have better care at home. The results may indicate that utilization of services goes beyond the mere availability of services but is also influenced by the quality of these services as well as the women's perceptions of the value, importance and quality of the services. Perception of poor quality of services (with women reporting harsh treatment by staff) has been highlighted as a deterrent to accessing institutional delivery by Barnes (2007), in addition to lack of access to quality and affordable care, ignorance of harmful practices and misconceptions of risk.

Another observation from studies carried out specifically for Jharkhand is that ANC seems to be associated with institutional deliveries as mothers who delivered at institutions utilized more ANC and postnatal care (PNC) from community health workers, namely Jharkhand's equivalent of the Accredited Social Health Activists (ASHAs) and the *Anganwadi* Workers (AWWs). In some districts the stay at the facility is extremely short, and the majority of mothers stay less than the 24/48 hours recommended [IndiaCLEN and PFI, 2010; International Institute for Population Sciences, 2010].

1.3.7 Quality, Patients' Perception, Satisfaction and Utilization of Services

There is growing evidence from developing countries confirming that patients' perception of quality of care and satisfaction with care is critical to utilization of health services (Andaleeb, 2001; Duong et al., 2004; Lafond, 1995; Akin & Hutchison, 1999; Yip & Wang, 1998; Baltussen et al., 2002; Bazant & Koenig, 2009). Other evaluation studies have pointed JSY as one of the most visible and highly effective strategies in terms of generating demand (All India Report, 2010; UNFPA, 2009) in India. With rapid expansion in access to maternal care and institutional deliveries due to JSY, Institutional deliveries in India have increased from 40.7% in 2005-06 to 72.9% in 2009-10 (IIPS & Macro International, 2007; All India Report, 2010). However, this focus on increasing demand for services, has met with less emphasis on improving quality.

Interest in the quality of health services in developing countries is on the rise, with increasing efforts towards maintaining acceptable quality standards (Thomason & Edwards, 1991). This, together with the growing evidence of the relationship between patient perception, satisfaction and utilization of services, calls for more studies on patient perception and maternal satisfaction to be carried out. The Royal College of Obstetricians and Gynaecologists (RCOG) in the United Kingdom has called for patient satisfaction surveys to be included among the parameters in the Maternity dashboard (RCOG, 2008).



1.3.8 Determinants of Patients' Satisfaction with Maternal Health Services

This report is part of a broader study where a systematic review of literature was conducted to understand the key determinants of care for maternal health services in developing countries. The review identified some elements of care as key determinants of patients' satisfaction with maternal care services in developing country settings.

The review of determinants of maternal satisfaction has successfully identified a wide range of determinants that are critical to improved utilization and sustenance of maternal health services in developing countries. The determinants from the studies covered all dimensions of care across structure, process and outcome. Major determinants reported in five or more studies include interpersonal aspects of care, cleanliness, availability of drugs and equipment, waiting time, privacy and confidentiality, length of consultation, perceived provider competence, birth companion, female providers, access and cost of care. The determinant with the largest body of evidence supporting it was interpersonal behavior. Provider behavior in terms of respect, politeness, friendliness and encouragement emerged as the most important predictor of maternal satisfaction with care. Other major determinants of maternal satisfaction, supported by significant evidence, were perceived competency of providers, convenience of access, information shared by provider, waiting time, cost of care, availability of medicines, supplies and services, availability and adequacy of human resources and cleanliness. Determinants of satisfaction with comparatively less evidence supporting them included support from a birth companion of choice, availability of female practitioner, length of consultation and privacy and confidentiality. Evidence around the outcome of care as determinant of maternal satisfaction was comparatively lesser. Literacy emerged as the most significant socio-economic variable influencing maternal satisfaction.

1.3.9 Level of Satisfaction between Institutional and Home Delivery

Patient preference for home delivery over institutional delivery is partly responsible for the low utilization of (facility-based) delivery services in developing countries and indeed India. This preference is mostly related to the level of satisfaction derived from home delivery in comparison to institutional delivery, based on previous experience or perceptions surrounding these services (Barnes, 2007; Montagu et al., 2011; Sudhakaram, 2009). Maternal satisfaction studies in India are few but a number of studies have explored women's choices between home delivery and institutional delivery. Some have gone a step further to explore patient choices between private and public health institutional delivery.

Secondary data analysis of delivery data from Demographic and Health Surveys from 48 developing countries between 2003 and 2010 showed that more than 70% of all births in the lowest two wealth quintiles in Sub Saharan Africa, South Asia, and Southeast Asia, occurred at home. The most common reason for this finding among both the richest and poorest women was the perception that institutional delivery was not necessary (Montagu et al., 2011). This view was further reported in India where medical attention is deemed unnecessary as delivery is believed to be a natural process (Barnes, 2007; Montagu et al., 2011; Kesterton et al., 2010) and traditionally, a sign of courage to have it unassisted (Montagu et al., 2011). In Mumbai slums, tradition plays the dominant role as well (Das S et al., 2010) while some of the reasons in Jharkhand have been mentioned earlier in this report.



Some community members in Indonesia believe health services are only necessary when there are complications (Titaley et al., 2010). Hence the services of traditional birth attendants were widely used. Women specifically reported satisfaction with these services and traditional practices such as massaging of mothers during the antenatal period, using traditional herbal medicine such as coconut oil and holy water. On the other hand, there have been reports of unkind treatment by health facility staff (Barnes, 2007; Lule, & Mtitimila, 1993), poor attitude and absenteeism (Sudhakaram, 2009; Das S et al., 2010) and overall perceived poor quality of health services (Nagdeve, 2008; Kesterton et al., 2010; Sudhakaram, 2009; Das S et al., 2010; Thind et al., 2008) as deterrents to seeking institutional delivery in India and other developing countries. In some cases where the care received at a health facility was good, women with complications will rather delay or avoid seeking care in same facility if they had a previous experience of disrespectful treatment by staff (Sudhakaram, 2009)

Other factors related to level of satisfaction with or preference for home deliveries over institutional deliveries (or vice versa) in developing countries include distance of health facilities and higher costs/expenditure versus easier, cheaper and quicker access to traditional birth attendants/home delivery (Kazmi, 1995; Montagu et al., 2011; Sudhakaram, 2009; Das S et al., 2010; Titaley, 2010; Lule, & Mtitimila, 1993; Balaji, Dilip, & Duggal, 2003). One study in India however suggests that economic status may influence decision on place of delivery even more than access, especially when choosing between private and public healthcare as utilization of private health services is seen as an index of wealth and status (Kesterton et al., 2010). Another study in India suggests that costs aside, a good patient experience at a public sector would be a more influential incentive for institutional delivery (Das S et al., 2010). There are, however, instances where women had expressed a desire for institutional delivery but still ended up delivering at home. The most common reason for this happened to be a rapid progression of labor and hence no time to reach a facility (Das S et al., 2010; Lule, & Mtitimila, 1993), thereby having no other option than to deliver at home. Other reasons include refusal of institutional delivery by older female relatives and sometime women being sent back home from facility as the date was not due (Lule, & Mtitimila, 1993).

With some of these reasons in mind, some authors have suggested that the quality of maternal health services (especially public services) should be improved and particularly made more user-friendly and attractive (Thind et al., 2008) together with more mass media involvement and community awareness created on the importance of maternal health services (Sudhakaram, 2009; Titaley et al., 2010) in order to improve satisfaction and increase demand for these services.

Studies on patient perception and satisfaction with services in India are however, surprisingly very few and largely restricted to family planning [Rao, Peters, & Bandeen-Roche, 2006]. Equally in Jharkhand, not much has been explored specifically in understanding women's satisfaction with maternal health services but few studies that have been carried out addressing this issue show that overall, women were not very satisfied in this aspect. Women expressed dissatisfaction mainly with the behavior of staff and expenses which often resulted in not returning to the health facility for their next delivery [IndiaCLEN and PFI, 2010]. A study conducted in 2009 by Jan Chetna Manch concludes that in Jharkhand many women were extremely critical of the poor quality of care they received. Complaints were received regarding repeated demands for money by hospital staff – including doctors; dirty surroundings; absence of staff; lack of infrastructure etc. Moreover, women also reported poor quality ANC, if at all available. They also stated that during ANC there was no check-up for BP, abdomen, weight, etc [International Institute for Population Sciences, 2010].



Validity and reliability of the few Indian studies that do exist has not been tested. Such studies would be extremely topical and policy-relevant given the current maternal health scenario in India. The evidence would help determine other aspects of care that need strengthening in the Indian public health system to support long-term demand and generate significant changes in health-seeking behavior, and what barriers can and should be removed.

This study aimed to thoroughly explore maternal perception and satisfaction with maternal health services, thereby contributing to evidence on this important aspect of maternal health services research.

1.3.11 Definition of terminologies

In a health system, quality broadly encompasses clinical effectiveness, safety and a good experience for the patient and implies care which is effective, patient-centered, timely, efficient and equitable (Thomason & Edwards, 1991; Institute of Medicine, 1990). User satisfaction is the 'patient's judgment on the quality and goodness of care' (Murray & Frenk, 1999; Andaleeb, 2001; Donabedian, 1980). Generally, maternal satisfaction has been defined using theoretical models of patient satisfaction (Christiaens, & Bracke, 2007). But there is consensus that maternal satisfaction is a multidimensional concept, influenced by a variety of factors (Christiaens & Bracke, 2007; Williams, 1994). Hence it has been defined as "positive evaluations of distinct dimensions of childbirth" (Linder-Pelz, 1982). Patient satisfaction is therefore indispensable to quality improvement with regard to design and management of health care systems (Andaleeb, 2001).

For the purpose of this study, maternal satisfaction consists of "three dimensions, which are interrelated and each are contingent upon a variety of factors. These dimensions that constitute maternal satisfaction are fulfillment/delight (happiness with their childbirth experience), lack of emotional distress (calmness rather than anxiety or fear), and lack of physical distress (lack of pain or exhaustion)" (Yentis, 2002).

1.3.12 Frameworks for dimensions of care

The classical Donabedian framework of categorizing dimensions of care into structure, process and outcome forms the theoretical basis for many studies on patient perception that have established users' ability to evaluate quality in terms of elements of structure, process and outcome of care (Haddad et al., 1998; Andaleeb, 2001; Baltussen et al., 2002). Haddad et al. developed a 20-item scale for assessing patient perception of care in Guinea with dimensions of healthcare delivery, personnel and health facility (Haddad et al., 1998). This was later adapted and tested in Burkina Faso (Baltussen et al., 2002) and even further in rural Vietnam (Duong et al., 2004). Andaleeb, in a hospital-based study in Bangladesh, identified five dimensions of perceived quality of care: responsiveness, assurance, communication, discipline and payment of bribes (Andaleeb, 2001).

Hulton et al. developed a framework specifically for quality of maternity care to facilitate assessment within institutional contexts (Hulton, Matthews, & Stones, 2000). Drawing on a wide body of research, the framework conceives of quality as a dichotomy of the provision and experience of care. It includes six elements for provision of care – human and physical resources, referral system, MIS, appropriate technologies, internationally recognized good practice and management of emergencies. The experience of care includes the following elements: human and physical resources, cognition, respect, dignity and equity and emotional support. This framework was later applied in assessing quality of maternal care services in an urban slum in India (Hulton, Matthews, & Stones, 2007).



For the purpose of this review, dimensions of care have been placed in the continuum of care approach, within antenatal, intra-partum and postnatal periods. The categorization into structure, process and outcome has been followed wherever required.

The study hopes to reveal some key barriers and facilitators in demand and utilization of maternal health services. This learning will provide inputs in developing context-specific strategies of care with quality as central theme. Focus on service improvements that are responsive to women's needs and perceptions will sustain and enhance gains made in institutional maternal care services under JSY. Consequently it will also enhance the effectiveness of the program in achieving positive outcomes in terms of reduced maternal and neonatal mortality.

2. METHODOLOGY

2.1 STUDY DESIGN AND INSTRUMENTS

The Literature review followed the methodology of systematic reviews and the qualitative study was a cross-sectional study of postpartum women who had delivered in the last three months preceding the study using In-depth interviews and Focus Group Discussions to gather information from the



participants on the perceptions of the care they had received in their pregnancy. The key findings of the two components are presented below.

Key Findings from Literature Review	Key Findings from qualitative study
<p>Key determinants of maternal Satisfaction:</p> <ul style="list-style-type: none"> • Process of care including the perception of 'good' care or competency of provider Physical environment and cleanliness • Outcome of care such as health of the newborn. • Interpersonal behavior of the provider. • Waiting time • Cost of care • Availability of medicines, supplies and services, • Availability and adequacy of human resources (availability of female practitioner) • Support from a birth companion of choice • Length of consultation • Privacy and confidentiality. <p>Key aspect of the selected tool to assess maternal Satisfaction</p> <ul style="list-style-type: none"> • Accessibility (distance and waiting time) • Interpersonal aspect of care (privacy, encouragement in delivery, politeness) • Physical environment (medical facility) • Technical aspect of care (health advices) • Outcome of care (newborn health condition) <p>Measurement Methodology : 5 point likert scale with scoring</p>	<p>Key determinants of care for institutional and home births:</p> <ul style="list-style-type: none"> • Interpersonal behaviors of the providers, • Influence of community health workers in deciding the place of delivery, • Accessibility of the health facility, • Emotional support during delivery, • Belief in clinical care in terms of presence of skilled staff, availability of medicine and • Cost of the services. <p>Women's Perception of Good care:</p> <ul style="list-style-type: none"> • Doctors were present and appropriate medical care (medicine) was available in case of complications • Pain management was available through medicines and/injections before labour • Immediate referral transport was available and affordable • Family members were allowed to be present during delivery • The convenience of having someone clean the place of delivery afterwards was valued • Monetary incentives outweighed formal and informal expenses

Figure 2.1: Key Findings from Literature Review and Qualitative Study

This quantitative survey is a cross sectional study of postpartum women who delivered in the last three months preceding the study using a structured questionnaire to gather information from the participants. The questionnaire consists of two parts:

I- Questionnaire to understand the level of satisfaction for maternal health services.

The questionnaire to understand the level of satisfaction for maternal health services was developed based on the determinants of care themes for maternal care identified from the literature review process and qualitative study (i.e. components I and II of the study) described above.



Translation of the questionnaire in local language (Hindi and Bengali) used in the study area was done and the questionnaire was peer-reviewed by experts working in maternal health at the national level and in the state of Jharkhand. Pre-testing was conducted in Jharkhand and further

Main Contents of the questionnaire:

I-General background

II-Specific thematic areas across continuum of care

- Accessibility
- Infrastructure
- Medical Supplies
- Human Resources
- Promptness of care
- Inter-personal aspect of care
- Emotional Support
- Cognitive Support
- Privacy
- Interaction with ASHA

III Additional themes

- Birth preparedness
- JSY system
- Intentional vs actual place of delivery
- Decision about place of delivery for next child

modifications were done as required. Back translation was also done and further inputs were taken from experts to arrive at the final version (Appendixi).

II- Maternal satisfaction with delivery care scale

Based on the identified tools that emerged from the literature review process, six tools were reviewed in detail. The extraction of the tools was done based on context (country,setting);background (target population, pregnancy state); conceptual basis; methodological development steps; structure of the tool; Contents of the tool (thematic areas); scaling and scoring; psychometric characteristics (reliability, validity etc); data collection process and evidence of

further use. Based on conceptual clarity, contextual relevance and measurement ease, the tool developed by Senarath et al. was selected. Each item in the original scale defining the concepts was reviewed and pertinence of new items was evaluated. It was assessed if there was same relationship between the underlying concept in both the original and target setting.Semantic equivalence was done which involved translations of the scale by a two language expert familiar with the original and target population language. Similarly two independent bi-lingual experts did the back-translations. The process was blinded in relation to the translators and back-translators. Deliberation with group of specialists was done to check both the relevance of the items and the semantic equivalence.

Adaptation process of the maternal satisfaction with delivery care scale	
Conceptual and item equivalence	Literature Review Discussion with experts in the field
Semantic equivalence	Two Translator : Fluent in target language, good understanding of original language Two Back-translator: Fluent in original language, good understanding of target language A synthesized back translated version
Expert group	Check relevance of the items and semantic equivalence
Instrument pretested	Tested in the target population for a thorough evaluation of its acceptability, understanding and emotional impact
Scale revised	
Main study	
Exploratory and confirmatory analysis	Evaluation of dimensional validity and adequacy of component items Evaluation of reliability Evaluation of the construct validity and criterion validity
Final Scale	

2.2 STUDY AREA

The study was conducted in the state of Jharkhand, which is one of the high-focus states under NRHM. In order to select a district representing the socio-economic profile of the state, 18 high



Figure 2.2: Study Area. Jamtara district, Jharkhand

focus districts identified by the state government were selected at the first level¹. At the second level based on two indicators- persons below poverty line and proportion of scheduled tribe population, Jamtara district was selected as it represented the socio-economic pattern of the state².

Jamtara is a newly formed district of the State (26th April 2001); it is relatively a small district with 6 blocks, 118 Panchayats and 1161 villages out of which 90 of them are uninhabited. The district has 132 Health Sub Centers, 15 PHC (Primary Health Centers), 4 CHC (Community Health Centers), 1 FRUs and One District Hospital³.



Table 2.1 Maternal Health Services Utilization in Jharkhand and Jamtara

	Mothers who had at least 3 Ante-Natal care visits during the last pregnancy		Institutional Births		Home Births		PNC care within 48 hours	
	DLHS (2007-08)	HMIS (2009-10)	DLHS (2007-08)	HMIS (2009-10)	DLHS (2007-08)	HMIS (2009-10)	DLHS (2007-08)	HMIS (2009-10)
Jharkhand	30.5	44	17.8	31	81.8	30	29.1	40
Jamtara	33.9	60	17.8	26	81.9	39	25.3	45

Source: DLHS-3, 2007-08; HMIS, 2009-10

This study focuses on level of maternal health care provided at the level- I, which includes births at Health sub center (HSC), Primary health center (PHC), and at home. In this district in the community health centers (CHC), only normal deliveries happen so these centers also formed part of the study area. The study area comprises the catchment area of all functional facilities at level 1, i.e. the 3 CHC- Nala, Kundhit, Narayanpur, 3 PHC- Bagrudih, Mihijam , Pabia and 1 HSC- Mohanpur.

2.3 STUDY PARTICIPANTS

The study was conducted during April- May 2012. A list comprising of all women who had delivered in all the level 1 functional facilities was generated. The list comprising the place of birth (home or facility birth), date of delivery, respondents address was obtained from the immunization tracking register maintained by the Auxiliary Nurse Midwife (ANM) in each facility. This register forms part of the routine report for the Health Management Information System(HMIS) under the National Rural Health Mission (NRHM), Government of India. To crosscheck the completeness of the register a random check of 5% of the data was conducted in the community by contacting the ASHA

1 High focus districts are selected in the state on the basis of 3 parameters – left wing extremism, proportion of tribal population and status of backward district under Backward Regions Grant Fund (BRGF).

2 Percent having BPL card: Jharkhand- 33, Jamtara- 31; Percent of ST population: Jharkhand- 27, Jamtara- 35. (Source: DLHS 3)

3 District Health Action Plan (2011-12)



coordinator (community level worker's supervisor) who collects and collates the information for the immunization register. The list contained 2377 women, who had given birth between 15th December 2011 and 31st March, 2012. A random sample of 535 women was selected from the list. There were 20 refusals and 15 women could not be traced during the survey so a final sample of 500 women (210 women who delivered at health facility and 290 who had delivered at home) gave their informed consent to participate in the study.

2.5 DATA COLLECTION AND MANAGEMENT

Listing of respondents

A listing activity was carried out in the catchment area of all the level 1 functional facilities by the study team prior to the community survey. A team consisting of six enumerators, a coordinator and the project manager responsible for monitoring the entire activity was recruited. The listing activity was conducted one week prior to the survey. The process generated a list of all women who have delivered in the catchment areas of all the level 1 functional facilities in Jamtara, Jharkhand in the three and half months preceding the survey (December 15th 2011 to 31st March 2012). In carrying out the listing activity, ANM meetings in each block of the district were conducted with prior permission of the chief medical officer of the district. The requisite data needed for the listing process for the study was noted manually from the immunization tracking register, which is maintained by the ANM. Then gaps in the register were identified in terms of delivery in the month of March 2012, omission of data regarding place or date of delivery. ASHA coordinators from the areas where there were missing information were contacted and data was recorded.

The survey process

The field team was recruited from Jamtara, Jharkhand.

One Project manager, two supervisors and 15 female investigators were shortlisted to attend the training sessions. Due to the heterogeneity of the study population in terms of the local dialect, special care was given to recruit investigators who could understand and speak Hindi, Bengali and *Khotta, a local dialect*. After the training, 10 investigators were selected for the survey.

Responsibilities:

- Project manager: the project manager was responsible for the overall execution of the community survey. He was responsible for the recruitment of the field team, their training, data collection, data entry and all associated logistics.
- Supervisor: The main responsibilities were to conduct the listing activity, participate actively in training session, Provide on field supportive supervision to investigators, assuring quality data collection—conduct spot and back checks, Manage all field level logistics
- Enumerators: two female enumerators were recruited who conducted both the listing activity and also supported the investigators in identifying sampled respondents during data collection.

All investigators and supervisors were provided with a code. This code was mentioned in all questionnaires that were filled for the community survey. The Code list that was followed is shown below:



Team 1		Team 2			
Field Staff	Code	Field Staff	Code	Field Staff	Code
Supervisor 1	SUP1	Supervisor 1	SUP2		
Enumerator 1	ENU1	Enumerator 1	ENU2		
Investigator team 1.1	Investigator 1	INV1.1A	Investigator team 2.1	Investigator 1	INV2.1A
	Investigator 2	INV1.1B		Investigator 2	INV2.1B
Investigator team 1.2	Investigator 1	INV1.2A	Investigator team 2.2	Investigator 1	INV2.2A
	Investigator 2	INV1.2B		Investigator 2	INV2.2B
Investigator team 1.3	Investigator 1	INV1.3A			
	Investigator 2	INV1.3B			

Figure 2.3: Code List for Investigators and Supervisors

Training of field team

A total of 15 female participants, two supervisors and one project manager were trained in a three day training session. The contents of the training for the field investigator included (Detailed guideline in annexure):

- Brief introduction of the project
- Interpersonal skills – will included training on both verbal and non verbal communication skills
- Training on questionnaire – the general guidelines to administer the questionnaire.
- Administering the questionnaire through role play.



The survey Team

At the end of the class room training session the investigators were evaluated on parameters of voice clarity, comprehension, interpersonal skills, rapport building etc and 10 of the 15 participants were finally selected for the data collection. Two participants were selected as enumerators.

Pilot testing

After the training of the field team a two day pilot testing was conducted. The objective of the pilot testing was to complete the entire cycle from data collection to data entry and streamline the process. A total of 10 questionnaires were filled by investigators during the pilot testing. These were entered in the Epi Info data entry format. Some modification based on the pilot was included in the questionnaire.

Quality control plan during data collection:

The following measures were taken to control the quality of data collected in the community survey:



- Questionnaire coding: Coding of questions is an effective way of achieving quality control. Each questionnaire had a unique code. The composition of the code was as follows: <investigator code>/<date dd.mm>/<questionnaire number>; So that each questionnaire can be traced back to the investigator, the date of filling up and the number of questionnaires each investigator team has filled.
- Checking of filled questionnaires: Each supervisor checked whether all the necessary questions had been asked, proper skipping pattern followed, responses properly circled and the open ended responses recorded clearly. If wrong skipping pattern was followed or any necessary question was not asked when it was required, the investigator who filled the questionnaire re-visited the household and filled the responses. All questionnaires were checked for completion before leaving the field.
- Field Observation/Spot checks: Field observation was an important tool to enhance the quality of data. During Initial days of fieldwork, supervisors closely observed how investigators were asking and marking responses in the questionnaire. After observation, they gave the feedback for improvement. Throughout the duration of the survey, each supervisor attended five percent of interviews of each investigator under his charge. Any observation they made was shared with the investigators once they had completed the interview and changes if necessary were made in the questionnaire thereafter. All changes made by supervisors were made with blue colored pens.
- Back Check: Regular back check of filled questionnaires was done by supervisors. Supervisors carried out independent inspections in not less than five percent of the questionnaires filled by investigators. The Project manager also did five percent surprise check/back check. Observations made during the back checks were noted in the questionnaire.
- All back checks and spot checks were documented in the Field control format

FIELD CONTROL INFORMATION		DATE OF INTERVIEW			
TEAM CODE	<input type="text"/>			SUPERVISOR CODE	<input type="text"/>
SPOT CHECK	YES 1	NO...2	CODE:	<input type="text"/>	SIGNATURE
BACK CHECK	YES..... 1	NO...2	CODE:	<input type="text"/>	SIGNATURE
ANALYSIS OBSERVATION	EXTENT OF PROBLEM	NO/MINOR.....1	MILD.....2	SEVERE.....3	

Figure 2.4: Field Control Information

Data entry and management

Data entry was done in Epi Info Version 7. Two data entry operators were employed and data entry was undertaken simultaneously with the field work. Three types of data checks were done:

- Validity Check was done at one question field or cell at a time. Checks were to ensure that the record identifiers, invalid characters, and values have been accounted for; essential fields have been completed (e.g. no quantity field is left blank where a number is required); specified units of measure have been properly used; and the reporting time is within the specified limits.
- Range Check: This check was done for data fields containing information about a continuous variable.
- Consistency Check was done to find errors regarding skips in the questionnaire.



- Ten percent of the entire data set was checked by the study team.

The data was converted to SPSS version 17.0 for analysis.

Ethical approval

At the time of the survey, the informed consent form was read (and explained) to the identified respondents. Since most of the respondents in the study are illiterate, a verbal consent was taken, that was recorded prior to the interview. The research was approved by the Public Health Foundation of India (PHFI) Institutional Ethics Committee (IEC) and the University of Aberdeen (Aberdeen, United Kingdom).

DATA ANALYSIS

The data from the survey was analyzed using SPSS software. Frequencies, descriptive statistics and cross tabulations were used for analyzing patterns and variations in the background characteristics and most of the key variables relating to antenatal, intrapartum and postnatal care. Tests of significance were used wherever relevant. For the analysis of the Maternal Satisfaction Scale, mean scores of satisfaction ratings were used. Socio-economic status (SES) index was calculated by combining variables of income, caste status and education through Principal Component Analysis. Percentile scores of the index were divided into three equal parts representing upper, middle and lower SES levels. Variation in maternal satisfaction was observed across SES levels and also other relevant maternal health indicators.



3. RESULTS

3.1: DEMOGRAPHIC, SOCIO-ECONOMIC PROFILE & REPRODUCTIVE HISTORY

Demographic, socio-economic characteristics and reproductive history of respondents provide useful insight into factors which influence health seeking behavior. This section describes the household and respondent characteristics of the sample, including brief information on the reproductive history of the respondents. The survey covered a total of 500 women, 210 of whom had an institutional delivery and 290 with home delivery.

3.1.1 Demographic & social characteristics

Age structure: The age of the respondents ranged from 18 years to 40 years with more than half of them (52%) in the age group of 19 to 24 years. The mean age of women who had a home delivery was 25 years, which was slightly higher than that for women who had an institutional delivery (23 years). More than half (56%) of respondents with home deliveries were aged 25 and above, as compared to less than a third (31%) of respondents with home deliveries.

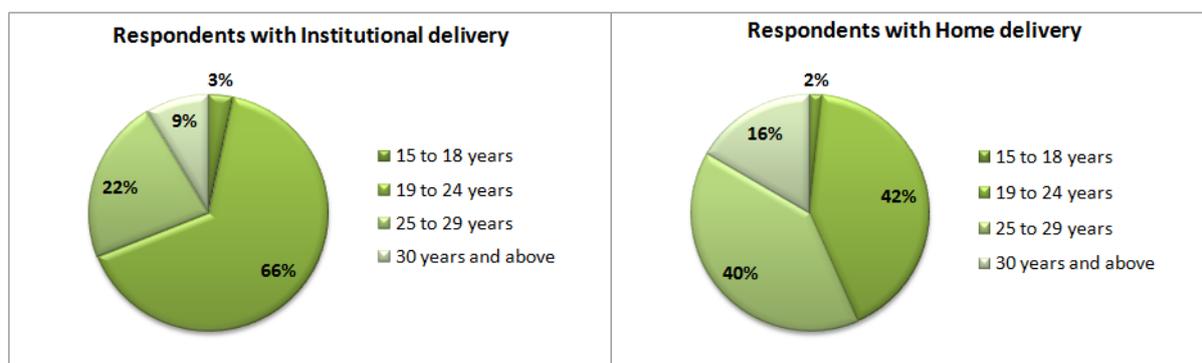


Figure 3.1. Age distribution

Religion: Hinduism was the dominant religion among the respondents. More than three-quarters of the respondents (79%) were Hindus whereas Muslims constituted less than a fifth (16%) of the sample.

Caste: In terms of caste status, the vulnerable social categories of Other Backward Classes, Scheduled Castes and Scheduled Tribes together constituted about 80% of the surveyed women with majority of this represented by women belonging to schedule caste (46%). Scheduled Tribes constituted a significant proportion (28%) of the sample. A higher proportion of women with home deliveries belonged to general category (25%) as compared to women with institutional deliveries (13%). On the other hand a larger proportion of women with institutional deliveries belonged to Scheduled Castes (50%) and Scheduled Tribes (32%).



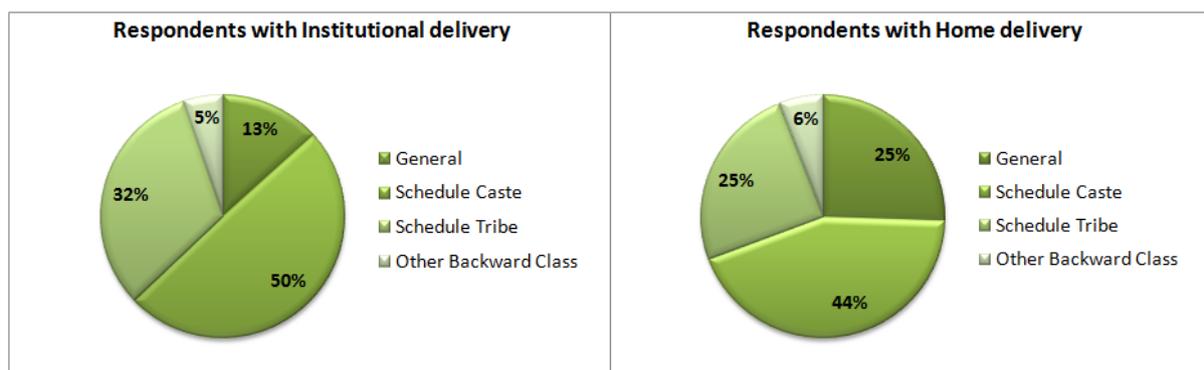


Figure 3.2. Caste distribution

Education levels: Respondents on the whole had moderate levels of education as a little over half (54%) of the respondents had no formal education while the remainder reported that they went to school. The mean years of schooling among women who had an institutional delivery were more than twice that of women who had a home delivery (4.52 years compared to 2.17 years). It was also observed that 70% of the illiterate women delivered at home as compared to 39% at institutions.

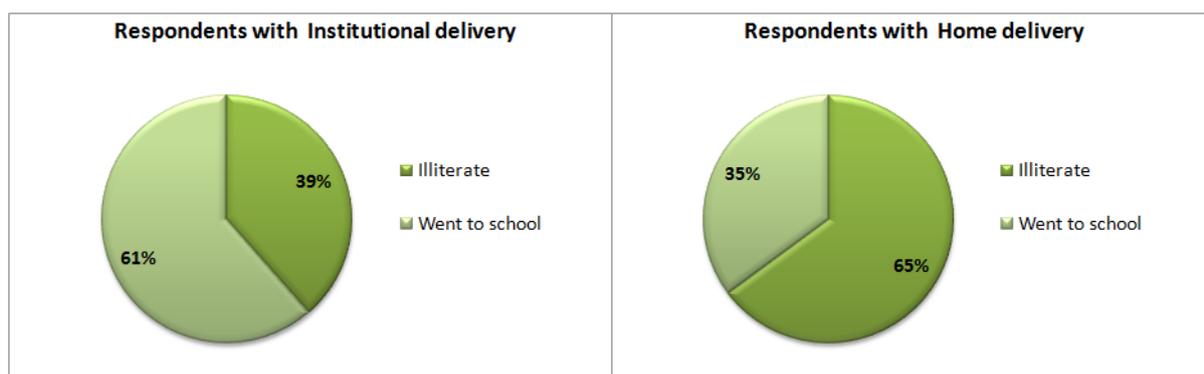


Figure 3.3. Education level

Family type and Household size: Joint family was the dominant family type, with close to 70% of respondents living in a joint family. The household size of the respondents varied from three to 30 members with a mean of 7.4, and majority (52%) having more than seven members in the household. 38.6% women with home delivery had nuclear families, as compared to 19.5% women with institutional deliveries.

Income: Overall, the monthly household income among the respondents ranged from less than INR 1,000 to greater than INR 50,000. Majority of the households (85%) had income of INR 5,000 or less with close to three-quarters (74%) having their average monthly family income between INR 1,000 and 5,000. Specifically, almost 90% of women with home delivery had average monthly income less than INR 5,000, against 82% of those with institutional delivery. About four percent of those with institutional delivery earned INR 10,000 and above against two percent of those with home delivery. Only 0.5% of women with institutional delivery earned above INR 50,000 with an absolute 0% of women with home delivery earning up to that amount.



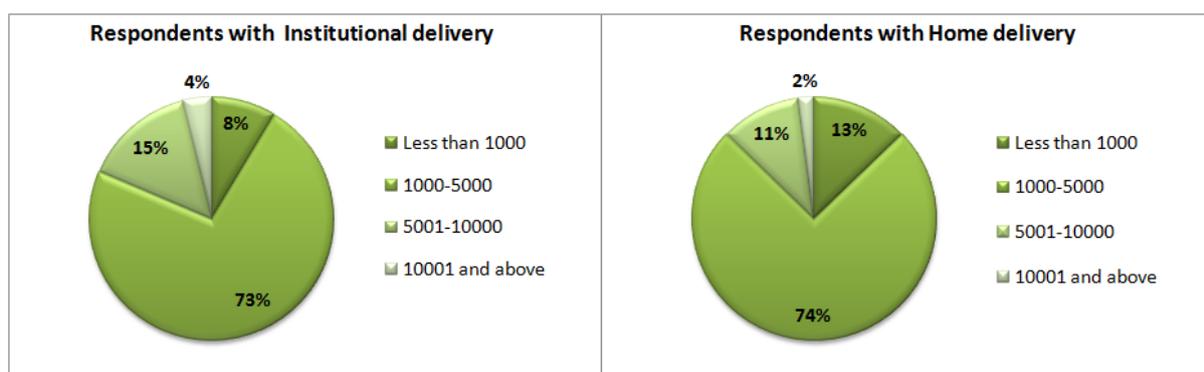


Figure 3.4. Monthly household income (In INR)

3.1.2 Reproductive history:

Some information on the parity of the respondents and details about their current birth was collected to understand their pregnancy history and maternal care seeking behavior. This helps explain many aspects of their overall reproductive behavior, perceptions on care and their choice of place of delivery as seen later.

Parity: The mean number of pregnancies among the surveyed women was 2.42. Women who had one and two pregnancies constituted almost two-thirds (64%) of the respondents. About a fifth of the respondents had more than four pregnancies. The mean number of pregnancies for women who had a home delivery was 2.70 which was higher than that for women who had an institutional delivery (2.03). Almost half of the women with institutional delivery had one pregnancy while only a fifth of women with home deliveries had one pregnancy. Similarly, less than a quarter (23%) women with institutional delivery had more than two pregnancies, as compared to 45% women who had home delivery.

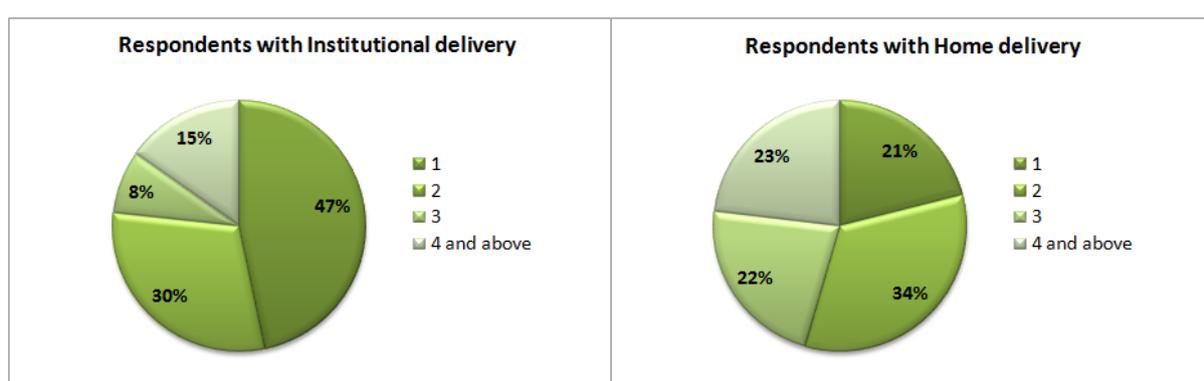


Figure 3.5. Parity

The mean number of living children for women who had an institutional delivery was 1.81 compared to 2.49 for women who had delivered at home. More than a third (39%) of women who had home delivery had three or more surviving children as compared to less than a fifth (18%) among women who had institutional delivery.



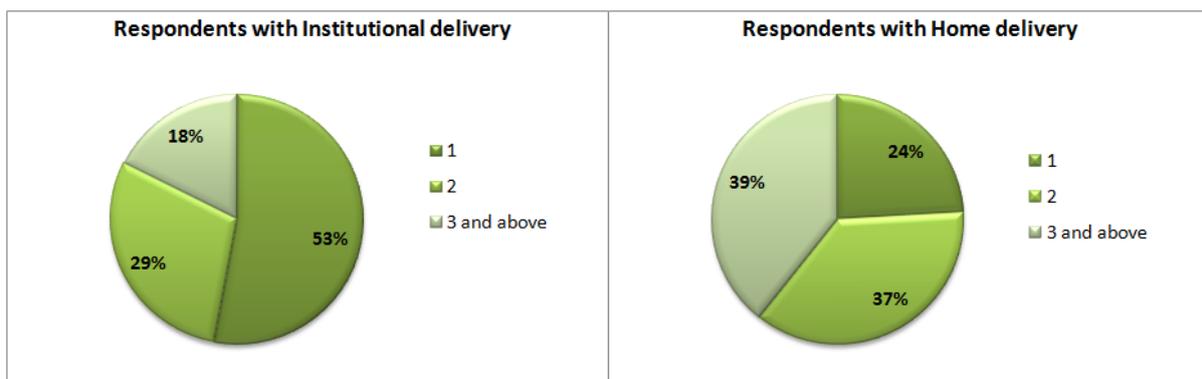


Figure 3.6. Number of living children

Sex of the newborn: The sex distribution of the newborns among the survey population was 49% male and 51% female.

3.2 ACTUAL PLACE OF DELIVERY VERSUS INTENTIONAL PLACE OF DELIVERY

Intended and actual place of delivery: Qualitative review has revealed that in some cases, women may have decided on a place of delivery for their child - i.e. institutional or home delivery - but certain circumstances during labor or shortly before, cause them to opt for the alternative choice of place of delivery. This section quantifies this scenario and provides insight into the circumstances and reasons why women either end up delivering at home when initially intending to have an institutional delivery or vice versa.

Of the 500 women in the survey, less than half (45%) indicated they intended to deliver in an institution and less than three-quarters (70%) of this group of women eventually went on to deliver in an institution with the remainder unintentionally delivering at home. On the other hand, out of the 55% of the total number of women in the survey who indicated they initially intended to have a home delivery, more than three-quarters (81%) of them succeeded in delivering at home with the remainder having to resort to institutional delivery for one or more of a number of reasons discussed below. Therefore, three-quarters of institutional deliveries were intentional and more than three-quarters (77%) of home deliveries were also intentional.

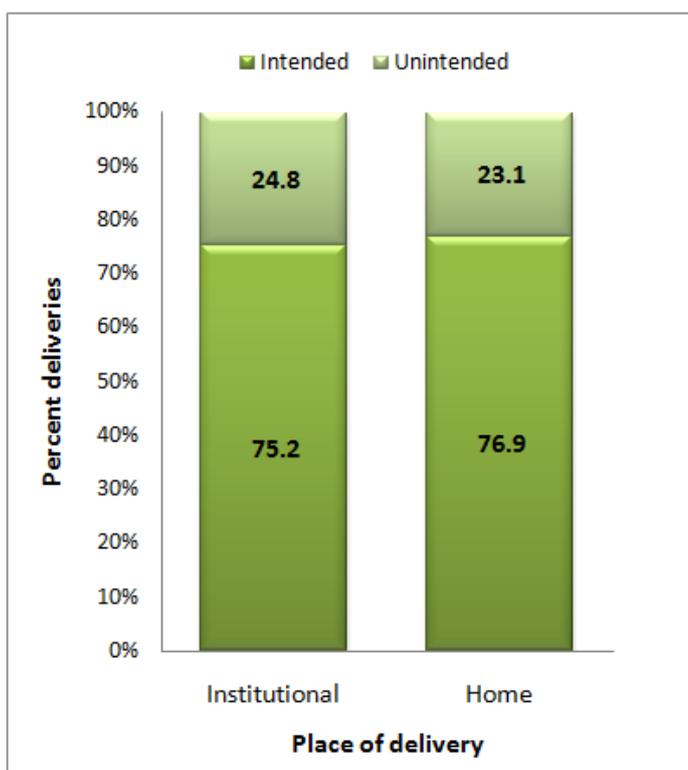


Figure 3.7. Place of Delivery – Intended v/s Actual



3.2.1 Reasons for choice of place of delivery

As stated above, the reasons for preference for and/or change from intended place of delivery are discussed here. Some of these reasons will be re-emphasized later, under the respective themes of maternal satisfaction into which they fall.

Intention: Institutional delivery

In the Indian context births have traditionally occurred at home, so institutional delivery, especially for poor and disadvantaged women and their families, is a relatively new phenomenon. This study's findings have highlighted factors that influence women's choice of where to give birth.

The perception of a better pregnancy outcome was mentioned by nearly seven out of ten women (69%) who had intended an institutional delivery. (Figure 1) Half the women noted the other individuals—community health worker (23%) or husband/family (22%)—greatly influenced or made the decision for them to have an institutional delivery. Nearly one out of four (23%) mentioned the presence of doctors and nurses in facilities as a reason for preferring institutional delivery.

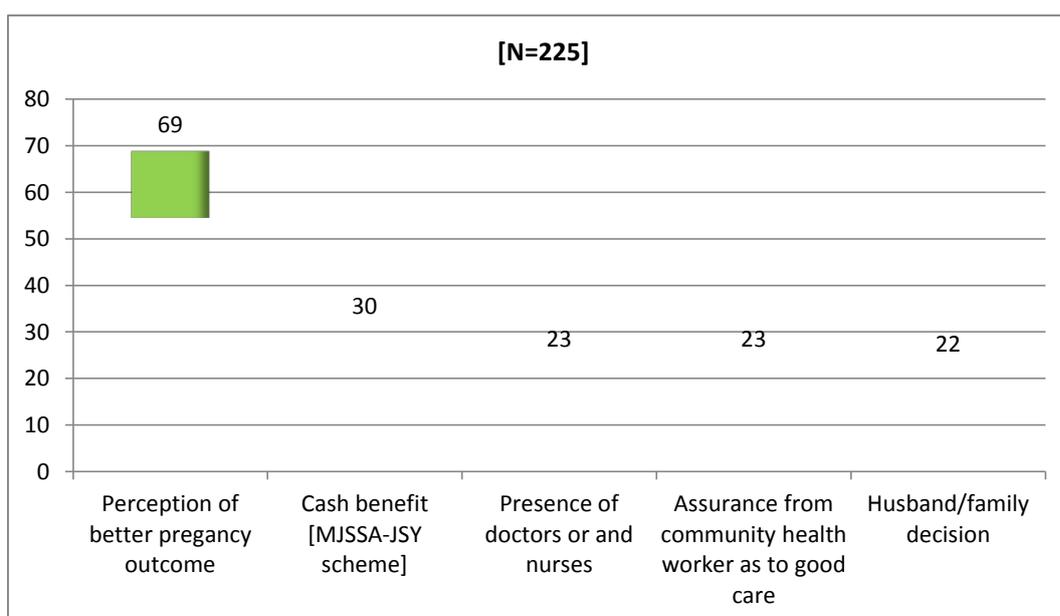


Figure 3.8. Reasons for preferring institutional delivery

For women who wanted a home delivery, two out of five (39%) women cited better comfort and privacy as the reason for electing a home delivery. (Figure 2) Nearly one out of three (33%) mentioned “no one to look after other children at home” as a reason for choosing home delivery. Out of four women cited the convenience of the *Dai* living nearby (27%) or the expense of an institutional delivery (25%) as the reason for wanting a home delivery. One out of five (21%) stated it was the husband's/family decision to have a home delivery.





Figure 3.9. Reasons for preferring home delivery

Two out of three women who had a home delivery would consider an institutional delivery for their next birth. (Figure 3) More than half such women (54%) cited good supplies as a reason for this, while about half (49%) cited perceived health benefits for themselves and their newborns as a reason. A little less than half (46%) of the women felt the cost of institutional delivery to be reasonable. About a third of the women (29%) mentioned availability of good care at facilities as a reason.

One third of women who delivered at home would not consider an institutional delivery in the future. (Figure 4) More than one third (35%) said so because they perceived poor care at the facility. A little less than a third would not consider institutional delivery on account of poor supplies in institutions. Twenty nine percent women thought that there were too many male staff at facilities and another 29% thought institutional delivery to be too expensive. Poor access was also cited as a reason for not wanting to deliver at facilities by 27% women.



3.3 ANALYSIS OF DETERMINANTS OF CARE

A number of themes were identified from the literature review and the qualitative components of this study (refer to review and qualitative study reports) as important determinants of maternal satisfaction with health services. Of these, six emerged as most important to women's satisfaction and these are analyzed here first. Additional themes of less significance are also analyzed subsequently. Each determinant has been assessed across continuum of care, its relative importance in deciding the place of delivery and also how it can affect decision about delivery in the institution.

3.3.1 Accessibility

Accessibility, in the case of institutional deliveries, has been defined in terms of distance of an institution from a woman's home, transport connectivity, opening and closing times at institutions. For home deliveries it implies convenient access to and availability of TBA for home delivery (refer to section 1.1.8.). For this study, geographical accessibility in terms of mode of transport, time taken to reach an institution for delivery, as well as proximity and availability of Dai is therefore assessed here as an important determinant of satisfaction that emerged from both the literature review and the qualitative study. The section also looks at the role of accessibility as a factor influencing women's decision making on choice of place of delivery.

Access of antenatal care: Accessibility was an important factor in ANC attendance, as most women chose to avail ANC care closest to their residence. Here, more than three-quarters of the women (76%) accessed the ANC institution on foot with a little less than a quarter of them (23%) using paid vehicles and an insignificant proportion (0.2%) being able to use free vehicle transport for access. Majority of the women (77%) were however able to access the institution in less than 30minutes rising to 91% within one hour.

Access of delivery care: More than three-quarters of the women who delivered in institutions were able to reach the institution within an hour, some within 30minutes, while less than a tenth (8%) took more than two hours to get to the institution for delivery. Most of the women who had institutional deliveries felt the institution was easily accessible at night or in case of an emergency (87%).

During labor, paid vehicle transport was the predominant means of gaining access to the institution seen in over half of the women who attended institutional delivery (56%), with almost all of the remainder accessing the institution by free vehicle transport and only a very small percentage (1%) having to walk to the institution for delivery.

Influence of access on choice of place of delivery: Access played an important role in influencing decision on place of delivery as well as actual place of delivery. Access to quick referral from primary to tertiary level institutions in case of emergency was the sixth most common reason, out of 10 possible reasons, why women intended to have institutional delivery in their last pregnancy; 12% of the women who initially intended to have institutional delivery mentioned this.

Difficult access in terms of distance as well as poor transport connectivity was a key barrier preventing women from reaching facilities for delivery. Among women who initially intended to have institutional delivery but ended up having a home delivery, 'lack of time to reach an institution



due to unexpected delivery' was ranked the most common out of four possible reasons, mentioned by over 90% of the respondents in this group. Lack of available transport to an institution was the second most popular reason cited by over half of them (52%), with another 46% citing lack of other family members to help arrange for transport as the third most popular reason for them unintentionally delivering at home.

In the case of home deliveries, convenient access to the Dai was one of the major reasons for preference of home delivery. For more than a quarter of the women who initially intended home delivery (27%), the close proximity of the Dai to their home emerged as the third most common out of 10 possible reasons for their preference of home delivery, while 'being unsure about the availability of transport at night' was the sixth out of 10 possible reasons for preferring home delivery over institutional delivery. For over a quarter (27%) of those who initially intended home delivery but ended up having institutional delivery, unavailability of Dai was the fourth most common reason out of a possible five, for having to opt for institutional delivery.

Access as a reason for choice of place of next delivery: Accessibility also emerged as one of the factors influencing choice of place of delivery in future. Among women who had institutional delivery in their last pregnancy, 8% mentioned 'good accessibility' of the institution as the reason they would like to deliver there again making it the fifth most common out of nine possible reasons for this category. Among those who had home delivery in their last pregnancy, 6% mentioned that good accessibility of the institution will encourage them to deliver in an institution in the future, the sixth reason in this group. Conversely, a fifth of the women with institutional delivery in their last pregnancy mentioned they will not be willing to have institutional delivery again due to poor accessibility of the institution (the sixth out of 10 possible reasons) while for those with home delivery, more than a quarter of them (27%) cited poor accessibility as the reason they will not want to deliver in an institution in the future (the fifth out of 10 possible reasons).

3.3.2 Cleanliness, Housekeeping and Structure

This constitutes maintenance of the place for delivery and its hygiene, housekeeping services such as changing of bed sheets regularly and cleaning toilets, as well as the overall maintenance of the physical structure, good water and electricity supply, beds, waiting areas for companions and even the institution's management set-up (section 1.1.8). For this study, concentration is on maintenance of good physical structure, cleanliness of surroundings including beds and toilets as identified as being important to women's satisfaction from both the literature review and qualitative study.

Respondents' opinion on cleanliness in the institutions: Almost all (97%) of the women who had institutional deliveries thought the structure of the facility was well maintained; more than three-quarters (79%) felt the toilets were clean enough for patient use and again, almost all (95%) indicated there was a clean delivery table in the labor/delivery room. The socio-cultural context of the women could have affected their notions of cleanliness. Moreover, most facilities in the region were in newly constructed buildings, which were clean. This could have led to overall high levels of satisfaction with cleanliness of institutions.



Table 3.1. Respondents’ opinion on cleanliness at the place of delivery for women who had institutional deliveries

Characteristics of cleanliness	Institution Deliveries (N=210)	
	N	%
Structure appeared well maintained	203	96.7
Toilets clean for patient use	165	78.6
Clean delivery table in the labor/delivery room	199	94.8

Cleanliness and good structure as a reason for choice of place of next delivery: Cleanliness and structure may also be important in determining the future utilization of institutional delivery services. In terms of willingness to deliver in an institution in future, ‘good structure’ was cited as the eight out of nine possible reasons by 2% of women who had institutional delivery for their last pregnancy while among those with home delivery in their last pregnancy, it was also mentioned as the eighth most common reason (out of nine) by 3% of women why they would have institutional delivery in future. For those not willing to have institutional delivery in future pregnancies, ‘poor structure’ was chosen as the seventh out of 10 possible reasons by 14% of the women who had institutional delivery in their last pregnancy against 13% for women with home delivery in their last pregnancy (also seventh out of 10 possible reasons).

3.3.3 Resources (Medicines, Supplies and Equipment)

This has been defined in terms of availability of drugs and equipment, ambulance services, laboratory services, and facilities for blood supply and transfusion (section 1.1.8.). Women’s perceptions on the availability of these resources and services are analyzed here and some insight is also gained into their influence on women’s choices of their last and future place of delivery.

Resources as a reason for choice of place of delivery: Among women who initially intended to have institutional delivery from the outset, 5% mentioned ‘adequate resources’ as their reason for preferring institutional delivery, ranking it the eighth out of 11 possible reasons in this category.

Resources as a reason for choice of place of next delivery: As a factor in choice of future place of delivery, ‘good supplies’ was mentioned by half the women with institutional delivery in their last pregnancy who would be willing to have an institutional delivery in a future pregnancy, ranking it the second most common out of nine possible reasons among these women, and the top most reason among women with home delivery in their last pregnancy, mentioned by over half (54%) the women in this group. For those who will not be willing to have institutional delivery in a future pregnancy, ‘poor supplies’ is mentioned by 40% of the women with institutional deliveries in their last pregnancy as the second of 10 possible reasons in this category and by almost a third (31%) of the women with home delivery in their last pregnancy, ranking it also the second of 10 reasons in this category.

3.3.4 Privacy

Privacy entails maintaining a woman’s dignity during examinations and the delivery process (section 1.1.8.). It may range from having separate delivery/examination rooms for each woman whenever



being seen by a health care provider to simple use of curtains to protect the woman from public view. It therefore emerged as an important determinant of satisfaction from the literature review and qualitative study especially considering the cultural context of the study area.

Women’s preference for female provider for maternity care is also an associated determinant, because of the greater comfort felt by women in communicating with them, greater sense of privacy and the perception that female providers are more sympathetic and good for examinations (George 2002). Qualitative review has revealed some hint of preference for female providers and also, lack of adequate space at home affecting the feeling of comfort and privacy with home delivery. Therefore gender of providers and availability of suitable space for home delivery are also looked at here as possible influences on the feeling of privacy itself.

Privacy at place of antenatal care: For Antenatal care, majority (87%) of the women who visited a health facility for ANC were satisfied with the privacy at these facilities. About 89% women who delivered in institutions and 85% women who delivered at home were satisfied with the privacy offered at the place of ANC checkup.

Table 3.2. Respondents’ satisfaction with privacy at place of antenatal care

	Place of Delivery				Total (N=472)	
	Institution (N=208)		Home (N=264)		n	%
	n	%	n	%		
Satisfied with privacy during ANC	186	89.4	224	84.8	410	86.9

Privacy at place of delivery: Almost all (99%) of the women with institutional deliveries were satisfied with the amount of privacy they were offered with this percentage only slightly lower (98%) among home deliveries.

Table 3.3. Respondents’ satisfaction with privacy at place of delivery

Characteristics	Place of Delivery				Total (N=500)	
	Institution (N=210)		Home (N=290)		n	%
	n	%	n	%		
Satisfied with privacy during delivery	208	99.0	283	97.6	491	98.2

Comfort with gender of provider: Respondents were asked about who assisted their delivery and whether they would be more comfortable with staff of different gender. About 93% of the institutional deliveries were by female providers, and almost all women were comfortable with the gender of the provider.

Table 3.4. Gender of person who conducted delivery

Characteristics		Institution Deliveries (N=210)	
		n	%
Gender of the person who delivered	Male	15	7.1
	Female	195	92.9



Privacy as a reason for choice of place of delivery: This section attempts to explore the influence of privacy on choice of place of delivery. Privacy ranked relatively low among reasons for preferring institutional delivery. Among women who initially intended institutional delivery, 'lack of space at home' was mentioned by 4% of them as the reason for preference of institutional delivery, ranking it ninth out of 10 possible reasons. Same reason was given by almost a fifth (17%) of women who initially intended a home delivery but had to opt for an institutional delivery (fifth out of six reasons).

However, it was more significant as a reason for preferring home deliveries. For those who initially intended home delivery, the perception of 'better comfort and privacy with home delivery' was cited by more than a third (39%) of these women, as the number one reason (out of 11 possible reasons) why they prefer home delivery. Presence of male staff at institutions was the 10th of 11 possible reasons for preferring home delivery (5%).

Privacy as a reason for choice of place of next delivery: Concerning willingness to have a future institutional delivery, 'more comfort' at institutions is mentioned as the sixth of nine reasons by less than a tenth (8%) of the women who had institutional delivery in their last pregnancy against 5% of those with home delivery (the seventh of nine reasons in this group), while 'more privacy' is not cited by any of the women with institutional delivery as a reason why they would like to deliver in an institution in future against less than 1% of those with home delivery in their last pregnancy.

As for the reasons why women will not be willing to have a future institutional delivery, 'no privacy' was not mentioned by any of the women with previous institutional delivery as a reason, while 'too many male staff' was mentioned by a little over a fifth of women with previous institutional delivery as the reason they would not want a future institutional delivery (fifth out of 10 possible reasons), six percent mentioned no comfort as their reason (eighth out of 10 possible reasons). On the side of those with previous home delivery, more than a quarter of them (29%) cited 'too many male staff' as the reason they would not be willing to deliver in an institution in future (third of 10 possible reasons), four percent mentioned 'no privacy' (seventh of 10 reasons) and another four percent mentioned 'no comfort' as their reason (eighth of 10 possible reasons.)

3.3.5 Emotional support

This is defined in terms of having a birth companion of choice, support from family members throughout pregnancy and social networks of expectant mothers (section 1.1.8.) and has emerged as important to women both from literature review and the qualitative study. This section therefore analyzes the amount of emotional support women received during their pregnancy and delivery. For this study, it is analyzed mainly in terms of family members and ASHA accompanying women to facilities for delivery, having a birth companion of choice and support from family members in taking care of the newborn during the postpartum period. It also analyzes the women's perceptions on support received from staff at institutions when accessing healthcare services.

Emotional support during antenatal care: During the antenatal period, emotional support from family members or ASHA was limited, with women often going for checkups unaccompanied. For ANC, more than one-third of the respondents (37%) reported that they visited the institution for antenatal checkups on their own. Only 16% were accompanied by an ASHA and in close to half (46%)



of cases either a family member or husband accompanied the respondent to the health facility for ANC check-up. Of women who delivered at home, almost half (45%) went to have their ANC checkups unaccompanied compared to 27% of women who delivered at an institution.

Table 3.5: Person usually accompanying women for antenatal care visits

		Place of Delivery				Total (N=472)	
		Institution (N=208)		Home (N=264)			
		n	%	n	%	n	%
Who usually accompanied for ANC at health facility	Husband	76	36.5	60	22.7	136	28.8
	Other family members	48	23.1	32	12.1	80	16.9
	Friend / Neighbor	0	.0	7	2.7	7	1.5
	ASHA	28	13.5	47	17.8	75	15.9
	Alone	56	26.9	118	44.7	174	36.9

A significantly higher proportion ($p < 0.05$) of women who had an institutional delivery were made to feel comfortable at the institution during their antenatal care compared to those who had a home delivery. Overall, almost all (96%) of the respondents reported that they were made to feel comfortable at the facility during ANC with 98% of institutional delivery cases against 94% of the home delivery cases reporting this.

Person/s accompanying women for delivery in institutions: Almost all (99%) of the women who had institutional delivery were accompanied by family members for delivery while almost half (47%) were accompanied by ASHA as well. About a tenth of the women were accompanied by their husbands for delivery.

Effort by staff to make the woman comfortable: Generally respondents felt that the staff took care to make them feel comfortable at the institutions as majority (93%) of the women reported that they were made to feel comfortable by the attendants/staff while at the facility.

Presence of family member or ASHA in labor room: For more than a quarter of the women (29%), neither ASHA nor family members were present in the delivery room, while 27% and 13% of the women had either a ASHA or family member present respectively; only 1% had both ASHA and family members present in the delivery room.



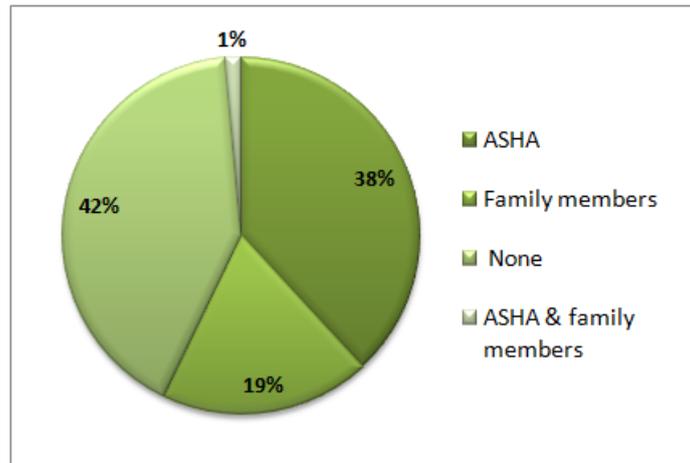


Figure 3.11. Person accompanying women in labor room

Primary encouragement to take care of mother and newborn during PNC period: In both institutional and home deliveries, the people who primarily encouraged the women in taking care of themselves and their babies in the postnatal period were their family members (69% and 64% respectively). In a little over a tenth (12%) of institutional deliveries, the ASHA provided the primary encouragement in the postpartum period compared to 3% in home deliveries and conversely, the Dai was responsible for encouragement in almost a fifth (19%) of home deliveries compared to 3% in institutional deliveries. None of the women with home deliveries were encouraged by a health professional while only less than a tenth (4%) of women with institutional delivery were encouraged by health professionals in the postpartum period. Friends and neighbors provided encouragement in less than 1% of all deliveries.

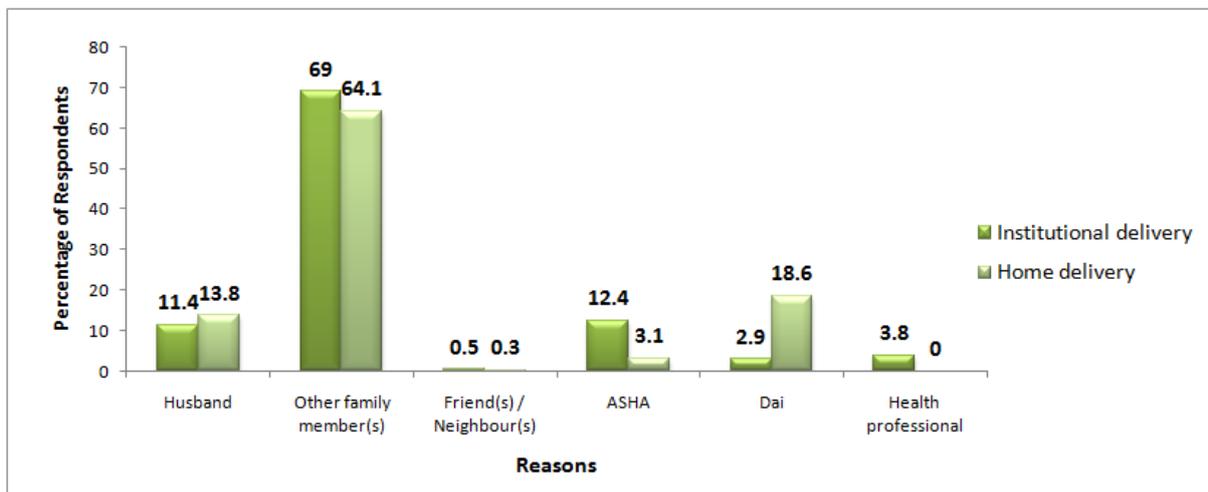


Figure 3.12. Encouragement to take care of mother and newborn during PNC period

3.3.6 Costs

Financial cost of accessing care and drugs can be a major factor influencing utilization and satisfaction with care, especially in resource-poor contexts of developing countries. Cost therefore emerged as a major determinant of maternal satisfaction in the literature review and qualitative



study. The median amounts spent by women during the antenatal and delivery periods are analyzed here to provide insight into the financial burden of pregnancy on women. The JSY scheme is also examined as it is meant to be an added incentive for institutional delivery. Therefore, the section will also look at the influence of JSY – the knowledge about the scheme, average amounts paid and timing of payments - on choice of place of delivery.

Expenditure for antenatal care: The median expenditure by women for antenatal care was reported at INR 1105 with highest median expenditure incurred for drugs and injections (INR 600). The median expense on drugs and injections was higher for institutional than home delivery cases. The median total expenditure specifically for institutional delivery cases was reported at INR 1600 compared to INR 750 for home delivery cases. This indicates the much higher cost burden of institutional delivery as compared to home deliveries. None of the respondents reported receipt of cash benefit on registering for antenatal care.

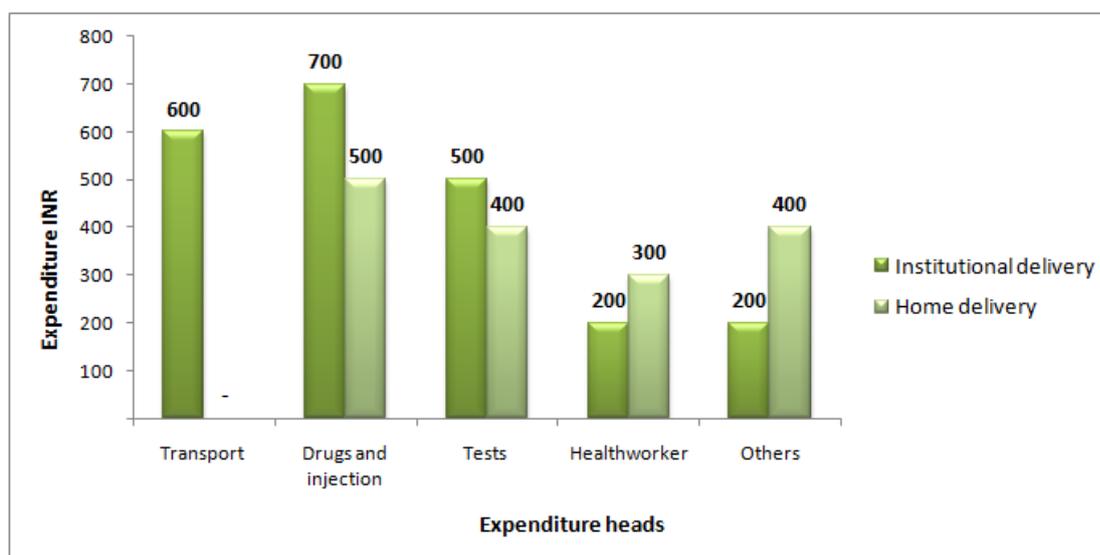


Figure 3.13. Median expenditure during ANC

Expenditure during delivery: Median expenditure during delivery was much higher for institutional deliveries (INR 1050) than for home deliveries (INR 600). The bulk of expenditure in both institutional and home deliveries was on drugs and injections (median of INR 700 and INR 500 respectively). Transport was the second highest expenditure head for institutional deliveries (median of INR 600), a cost totally saved in home deliveries. Median expenditure on tests was also higher in institutional than home deliveries (INR 500 against INR 400). The pattern was the opposite in payments to health workers with median expenditures higher for home as compared to institutional deliveries (INR 300 against INR 200). However, when it came to “other” expenditure (which included responses such as blood in emergencies, sweets and dry fruits, gifts for birth attendant, clothes for baby and food for family members), this was higher in home delivery (INR 400) than institutional delivery (INR 200).



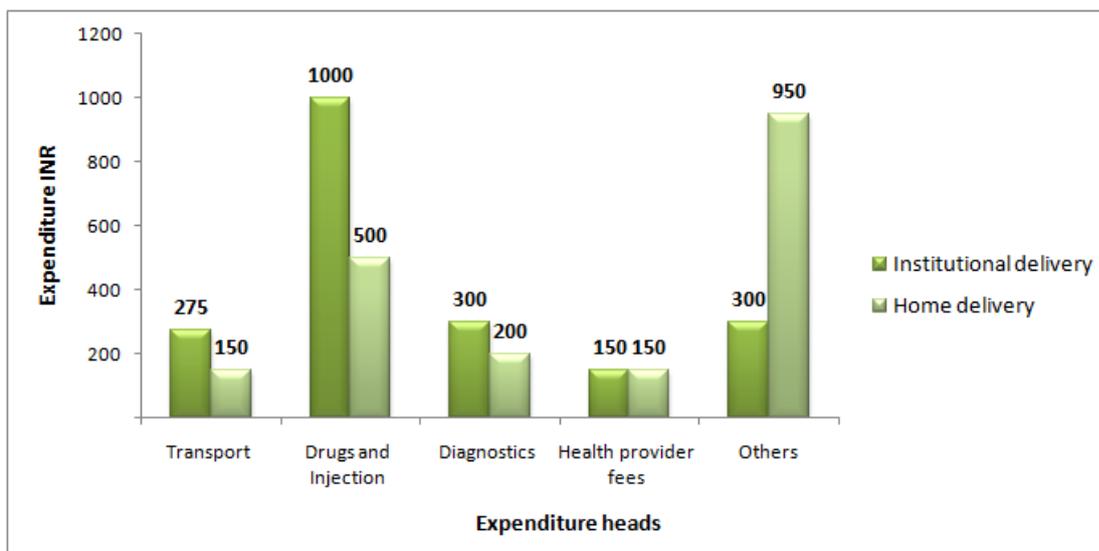


Figure 3.14. Median expenditure during delivery

Influence of financial incentive and cost on choice of place of delivery: Financial incentive in the form of JSY attracted women to institutional delivery, but fear of excessive cost burden also acted as a deterring factor. Among women who initially intended to have an institutional delivery, awareness of JSY was the second most common out of 10 possible reasons, with 30% of women mentioning this. On the other hand, ‘too expensive to access’ was the fourth most common out of 10 possible reasons for women preferring to have a home delivery from the outset, with a quarter of these women mentioning this.

Influence of cost on choice of place of next delivery: With regards to future place of delivery, among those willing to have an institutional delivery in a future pregnancy, ‘reasonable cost’ of accessing institutional delivery was cited as the reason by more than a quarter of those with previous institutional delivery and almost half those with previous home delivery ranking it fourth and third out of nine possible reasons for this category respectively.

For those not willing to have future institutional delivery, ‘too expensive’ was mentioned by almost a quarter (24%) of those with previous institutional delivery and a higher 29% of those with previous home delivery as the fourth and third most common reasons respectively out of 10 possible reasons.

JSY awareness: Regarding knowledge of the JSY Scheme, a higher percentage (95%) of the women who had institutional delivery were aware of the scheme than women with home delivery (84%).

Of the women with institutional delivery who were aware of the scheme, almost three-quarters of them (73%) gained the awareness during their last pregnancy (the pregnancy being discussed in this study) and a little over a quarter of them (26%) in a previous pregnancy while for those with home delivery, over half of them (57%) became aware in their last pregnancy and less than half (43%) in a previous pregnancy.

Regarding where or how this awareness was gained, almost three-quarters of the total number of women acquired this information from the ASHA (74%) - with the percentage slightly higher among those with institutional delivery (80%) than those with home delivery (70%). Friends and neighbors



were also important sources of JSY information (16% institutional delivery, 19% home delivery). Hospital staff accounted for less than five percent (3 %) of JSY knowledge overall.

Table 3.6 Information on JSY awareness and receipt of JSY benefit

		Place of Delivery				Total (N=443)	
		Institution (N=199)		Home (N=244)		n	%
		n	%	n	%		
Awareness regarding receipt of INR 1400 if delivered at institution		199	94.8**	244	84.1	443	88.6
When was JSY related information received	During this pregnancy	145	72.9	139	57.0	284	64.1
	During previous pregnancy	52	26.1	104	42.6	156	35.2
	Other	2	1.0	1	.4	3	.7
Source of JSY related information	ASHA	158	79.4	170	69.7	328	74.0
	Hospital staff	5	2.5	10	4.1	15	3.4
	Friend / Neighbour	32	16.1	46	18.9	78	17.6
	Family member	4	2.0	18	7.4	22	5.0
Received JSY benefit		97	46.2	9	3.1	106	21.2

Receipt of JSY benefit: Less than half the women with institutional delivery had received their JSY money (46%) at the time of interview (three months post delivery) and only 3% of those with home delivery had received theirs. Majority of the women who had received the JSY money (84%) received INR1400, eight percent of those with institutional deliveries received up to INR1650 and three percent of the women (both institutional and home deliveries) received as little as INR 500.

Timing of the JSY payment: Only about 10% of the total number of women who received JSY money received it on the day of delivery. About a third (32.9%) of the women received their JSY money within one week after delivery. A little less than one third of the women (29.9%) received their JSY money later than one week but within one month after delivery with up to about a quarter of them receiving theirs later than one month after delivery. Of the women who did not receive any JSY money, over a third of them (38%) were told why they were not given the JSY money.

JSY as an incentive for institutional delivery: Respondents were asked about their willingness to deliver in a facility if the JSY amounts were reduced or increased or even abolished. Of the women who initially intended to have institutional delivery and went on to have one, 91% indicated they would still want to deliver in an institution if the JSY money was reduced from INR1400 to INR700, with this percentage even rising to 93% if no JSY money was paid at all. On the other hand 88% of the women who initially intended to deliver in an institution but ended up with a home delivery said they would deliver in an institution even if the JSY money was reduced from INR1400 to INR700, or even if no JSY money was paid at all. Of the women who initially intended home delivery but ended up having institutional delivery, almost half (48%) indicated they would be willing to deliver in an institution if they were assured of the JSY money of INR1400, with this number rising to 58% when asked if they would consider institutional delivery if the JSY money was doubled to INR2800. Of the women who intended home delivery and also delivered at home, about half (49%) indicated they would be willing to deliver in an institution if assured INR1400 JSY money, rising to 61% if the JSY money is doubled to INR2800.



Expenditure on delivery across income groups: The pattern of expenditure during delivery across income groups showed that even among households with income less than INR1000 per month, about 28% spent more than INR 1500 on delivery. This implies a large cost burden on them. Similarly, about a fifth (19.6%) of households with income between INR 1-5000 per month and a third of households with monthly income between INR 5-10,000 spent more than INR 1500 on delivery.

3.3.7 Human resources availability and adequacy

Availability of human resources, especially doctors at institutions, emerged as a key determinant of maternal satisfaction in the qualitative research. Availability of doctors to attend to emergencies and/or maternal and newborn complications and also nursing personnel are essential prerequisites for institutional care. This section analyses responses relating to human resources availability, focusing on presence of doctors and nurses at institutions (especially during labor) and how the women's perception of the adequacy of staffing at institutions influences their choice of place of delivery. Though the Dai is not a part of the orthodox health system, she remains the most important delivery care provider for home births and her role in determining preference for home or institutional delivery is therefore considered here as well.

Presence of staff upon arrival at institution: Almost three-quarters (73%) of the women with institutional deliveries mentioned there was a doctor on their arrival at the institution for delivery and almost all the women (99%) indicated there was at least a nurse or ANM on arrival at facility.

Primary birth attendant: Nurses were the primary staff assisting institutional deliveries (89%) while less than a tenth of institutional deliveries were assisted by a doctor (9%) and the remainder by an ANM. For home deliveries, the Dai was responsible for taking much more than three-quarters (83%) of the deliveries while family members were next highest with more than a tenth (12%) of deliveries. Nurses took almost 5% of home deliveries while doctors, ANM and friends/neighbors took less than 1% of home deliveries. If the total deliveries conducted are aggregated, then Dai (48%) and nurses (40%) emerge as the primary birth attendants.

Human resource availability as a reason for choice of place of delivery: Among women who initially intended institutional delivery, 'presence of doctors and nurses at institutions' was cited as the third most common reason out of a possible 10, with almost a quarter of women (23%) mentioning this. For those with initial intention for home delivery, closer proximity of Dai (implying easier availability) was cited by more than a quarter (27%) of the women as their reason for preferring a home delivery (third of 10 possible reasons). Conversely, unavailability of Dai was the reason (fourth out of five reasons) for more than a quarter (27%) of those with initial intention for home delivery who ended up having institutional delivery instead.

Human resource as a reason for choice of place of next delivery: For future place of delivery, 5% with previous institutional delivery mentioned 'adequate staffing' as a reason for preferring institutional delivery again, while 7% with previous delivery at home also mentioned the same reason. The responses rank seventh and fifth reasons out of a possible 10 in their respective groups. Among those not willing to have institutional delivery in future, 6% of those with previous institutional delivery mentioned 'fewer staff' as their reason for not wanting future institutional delivery against



4% of those with previous home delivery, making this response the joint eighth out of a possible 10 in the respective groups.

3.3.8 Promptness

Promptness of care emerged as a significant determinant of maternal satisfaction in the literature review. This includes waiting time before antenatal consultation and before being admitted during labor, timely attendance and constant attention from provider. It also includes promptness of referral in emergencies, as well as immediate contact with newborn. In this study, waiting times, promptness in reacting to emergencies and promptness of first postnatal check up are considered.

Waiting time before ANC consultation: Waiting times for ANC checkups were shorter, as most women obtained ANC care in the neighborhood Anganwadi Centre; over half (52%) of women attending institutions reported that they had to wait for less than 15 minutes before seeing a health provider during their antenatal visits. Only less than a tenth (8%) of women had to wait for more than an hour and 92% of the women overall, were satisfied with the waiting time before seeing a health provider. While examining the results it must be remembered that women were not adequately aware to be able to determine whether or not they were given appropriate clinical care during ANC.

Waiting time before admission for delivery: More than three-quarters of the women were attended to within 30 minutes of arrival at an institution (83%) for delivery. For home deliveries as well, a similar proportion (79%) were reached by the service provider (mostly Dai) within 30 minutes of being summoned. Less than a tenth (9%) of total deliveries (both institutional and home) had a waiting time of more than 1hour. The data therefore does not show significant difference between institutional and home deliveries in the time taken for care to be initiated (excluding the travel time in reaching institutions for institutional deliveries).

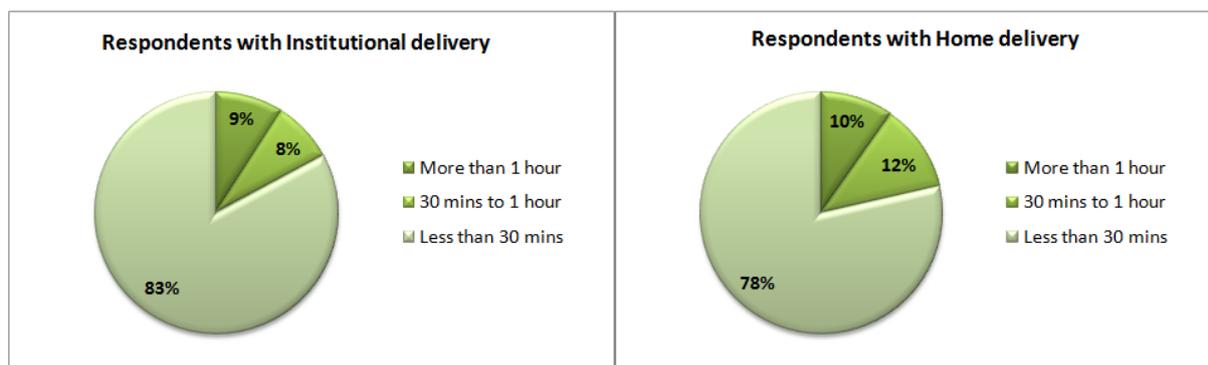


Figure 3.15. Waiting time before attended for delivery

Time taken to respond to emergencies: Among women with institutional delivery who reported having an emergency/complication with delivery, almost all (94%) were satisfied with the response they received to that emergency. Similarly, 93% of home deliveries with emergency/complication were also satisfied with the response to their emergency/complication. An equal proportion of respondents (82% and 81% in institutional and home deliveries each) were satisfied with the time taken to respond to the emergency.



Timing of first postnatal checkup: For postnatal check up, 93% of women with institutional delivery received their first check within 24hrs following delivery compared to 77% for home delivery.

3.3.9 Interpersonal aspects of care

Interpersonal aspects of care highlight the nature of one-on-one interactions between staff or providers and the women. The theme looks at politeness, respectful behavior, dignity and courtesy by all staff including doctors, nurses and support staff. In this study, respondent’s perceptions on the behavior of staff during delivery, ANC and PNC visits, as well as how comfortable the women felt discussing concerns with their provider and how willing the provider seemed to answer their questions are analyzed.

Experience of abusive behavior during ANC checkups: More than a tenth (16%) of the respondents reported bad behavior by staff during the antenatal period with the percentage being higher among women who delivered at home (17%) compared to women who had institutional delivery (15%). Of the women who had an institutional delivery, 93% indicated that they felt comfortable/free to discuss all their concerns with their provider during ANC checkups, while a slightly lower percentage (92%) of women who delivered at home indicated the same. Respondents were asked about the most common condition that would promote freer communication with a provider. The most common conditions that would promote better communication with a provider in the ANC period are if he/she were someone more familiar to the patient (57%) or someone friendlier (26%).

Experience of abusive behavior from staff: Concerning staff behavior, more than a tenth (12%) of women with institutional delivery reported bad behavior from staff against 7% for home delivery. However, about 90% of women with institutional delivery indicated they felt comfortable or free to discuss all their concerns with their provider. The same percentage of women with home delivery also indicated the same. More than half of the respondents felt that communication with the provider would be freer is if he/she were someone more familiar to them (55% overall). A higher percentage of those with institutional delivery mentioned this (67%) than those with home delivery (47%). Next most common was ‘someone friendlier’ (39%) with a lower percentage of those with institutional delivery (27%) mentioning this than those with home delivery (47%). Less than a tenth (7%) of women with home delivery indicated they would be more comfortable if the provider were female while none of those with institutional delivery reported this.

Table 3.7 Experience of abusive behavior and factors promoting comfortable patient-provider interaction

		Place of Delivery				Total (N=500)			
		Institution (N=210)		Home (N=290)		n		%	
		N	%	n	%				
Bad behavior of staff during delivery		26	12.4	21	7.2	47	9.4		
Felt comfortable/free to discuss all concerns with provider		189	90.0	260	89.7	449	89.8		
What promotes comfortable communication with provider during delivery	Female gender	0	0.0	2	6.7	2	3.9		
	Someone familiar	14	66.7	14	46.7	28	54.9		
	Someone more friendly	6	28.6	14	46.7	20	39.2		
	Others	1	4.8	0	0.0	1	2.0		



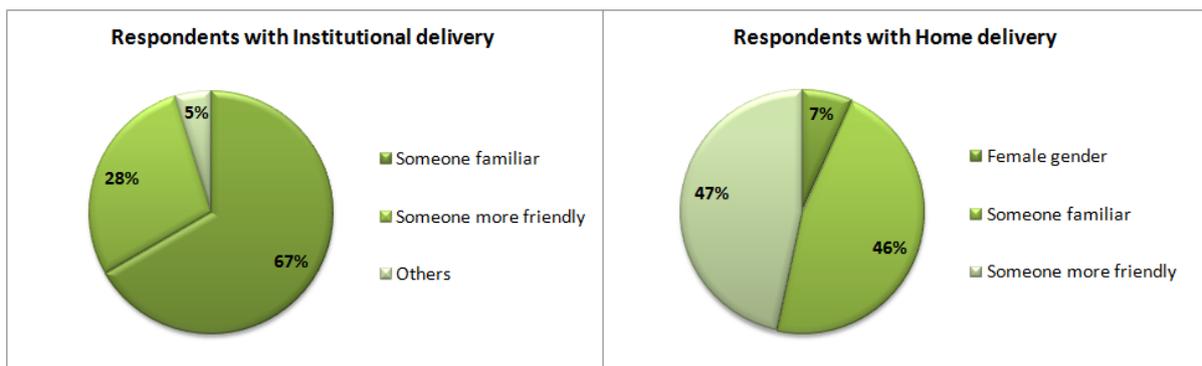


Figure 3.16. Factors Promoting communication with provider during delivery

Abusive provider behavior as deterrent to institutional deliveries: Fear of abusive behavior from provider was the sixth of 10 reasons why women preferred to have a home delivery, mentioned by over a tenth (14%) of the women in this group.

Experience of abusive staff behavior during PNC visits: For PNC, 15% of the women with institutional delivery reported they experienced bad behavior from staff during PNC while 12% reported same for home delivery. A higher percentage of women (95%) with home delivery reported they felt comfortable discussing their concerns with their provider compared to 91% of women with institutional delivery. Among those who reported not feeling comfortable with their provider, the most commonly reported condition that would promote comfortable communication with the provider was if the provider were someone familiar (60% institutional delivery and 56% home delivery). Preference for female gender of provider was more with those who had institutional delivery (30%) than those with home delivery (6%) while preference for ‘someone friendlier’ was more with home delivery (31%) against institutional delivery (5%).

3.3.10 Perception of good care

‘Good’ care essentially implies meeting women’s expectations, adequacy of length and frequency of consultations, completeness of procedures, perception of negligent care and perceived provider competence from literature review (section 1.1.8.). This section considers contact time with birth attendant/primary provider during delivery and during antenatal and postnatal visits; and also the perceptions of the women on the frequency of visits made by provider. It also attempts to highlight the influence of ‘good care’ and ‘poor care’ on women’s choices on future place of delivery.

Time spent by staff with respondent during labor and delivery: Regarding the amount of time spent with each patient during labor and delivery, there was not much difference between the percentages of women with institutional and home delivery who thought the time their provider spent with them was adequate (94% against 93% respectively).

Adequacy of contact time with PNC provider: As for contact time with the PNC provider on each visit, half of the women with institutional delivery felt the time was ‘just enough’ compared to a little over a third (35%) of those with home delivery. The most common view shared by those with home



delivery instead, was that the time was 'too little' (45%) with just over a fifth of them (21%) saying the time was even too much against 23% of those with institutional delivery who also said the time was too much.

Frequency of PNC visits: The perceptions on frequency of visits by PNC provider differed significantly between home and institutional deliveries. Among women with institutional delivery, about a third (29.5%) felt the visits were too few, but half (50%) felt the frequency was just enough and about a fifth (20.5%) felt the frequency was even too often. On the other hand, almost half the women choosing home delivery felt the frequency of visits was too infrequent (48%), with a third (32%) feeling the visits were just enough and 20% feeling the visits were too often.

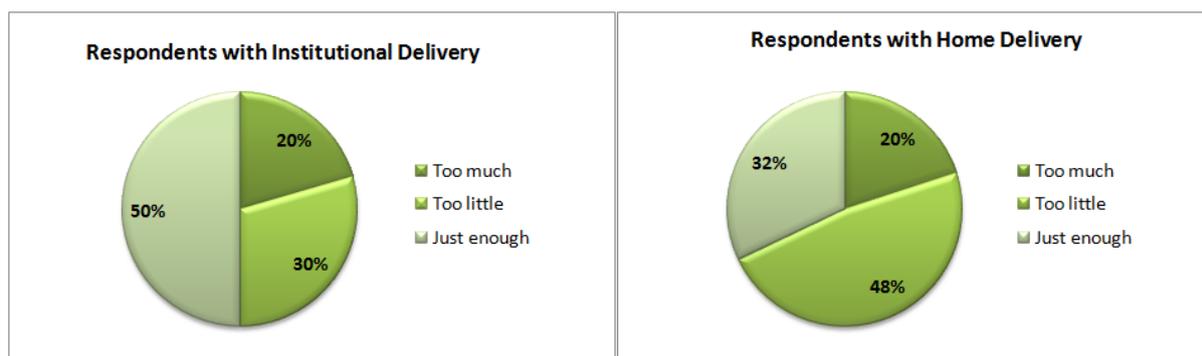


Figure 3.17. Adequacy of PNC visits by staff/ASHA

'Good care from providers' as a reason for choice of place of next delivery: For future place of delivery, 'good care' was the third most common reason for willingness to have future institutional delivery among 41% of the group of women with previous institutional delivery against 29% of those with previous home delivery as the fourth most common reason in their group.

Conversely, perceived poor care was one of the main reasons deterring women from opting for institutional deliveries. For those unwilling to have future institutional delivery, 'poor care' was cited as the top most reason among women with previous institutional delivery (42%) and also the top most reason for the group with previous home delivery (35%).

3.3.11 Cognitive support

Cognitive support involves information shared between providers and women on their condition and the care they require. This includes prenatal counseling and health education, registration and patient feedback and postpartum health education on newborn care. Communication also needs to be culturally sensitive and give women a sense of participation in the process of care. This section analyzes the content of the information passed during delivery, antenatal and postpartum care by the primary care providers to the women and attempts to assess the adequacy of this information to the women's needs from their own perspective as well as the willingness of the provider to answer questions the women had.

Information shared during the antenatal period: For the antenatal period, respondents were asked about seven topics on birth preparedness that health professionals/ASHAS ideally should discuss with them during this period ranging from regular antenatal visits to JSY benefits. The three most



discussed issues were regular ANC check up, identifying a skilled provider/ making arrangements for delivery and benefit of JSY. In each of these three issues more than 80 percent of the respondents reported discussion with their provider, however none of these showed significant differences between institutional and home delivery cases.

The discussion points that showed significant differences ($p < 0.05$) between institutional and home deliveries were making a plan/arrangements for transportation to a facility during labor, recognizing danger signs of serious health problems during pregnancy, childbirth or soon after and identifying/ making arrangements for a blood donor; each of these being discussed to a lesser extent among those with home delivery than institutional delivery.

Overall, JSY benefits was the most discussed issue (86%) and arrangement of blood donor the least discussed (21%).

Adequacy of information shared and willingness to answer questions: A significantly higher proportion ($p < 0.05$) of women who delivered in an institution reported that the entire information shared with them during the antenatal period was adequate compared to women who delivered at home with 84% of the women who delivered at institution reporting this compared to 74% for home delivery.

Overall, 88% of the respondents indicated that their provider was willing to answer their questions. A marginal difference was observed between institutional and home deliveries – 91% against 86% respectively.

Communication by primary care provider during delivery: There was generally some communication from both institutional and home delivery care providers with the women during labor and delivery, with at least 91% of the total number of women in the survey indicating there was some communication from their provider. Specifically, there was no difference in communication about the progress of labor between the provider for institutional delivery and home delivery (92% each), while there was slightly more communication in institutional delivery concerning procedures to be done (94%) compared to home delivery (93%). However, when it came to pain management, the reverse was the case with 91% of women with home delivery indicating there was communication from their provider against 89% for institutional delivery. Similarly, there was slightly more appreciation from the women with home delivery that the information was adequate to their needs (92%) than those with institutional delivery (91%). Both institutional and home delivery women almost equally felt the provider was willing to answer their questions (92% and 91% respectively).

Information shared during postnatal care: Regarding topics discussed during the postnatal visits, breastfeeding was the most commonly reported topic discussed for both institutional and home deliveries (97% and 94% respectively). The least discussed topic was family planning, discussed in only 60% of institutional deliveries and 48% of home deliveries. Mother and baby's cleanliness, hygiene and immunization were more commonly discussed in institutional deliveries than home deliveries while mother's nutrition was slightly more commonly discussed in home deliveries than institutional deliveries. The general perception that the information was adequate to the women's needs was high (90% overall) but slightly more so in institutional (92%) than home (89%) deliveries.



Women with both institutional and home deliveries equally reported that their provider was interested and willing to answer their questions (93%).

3.3.12 Continuum of care/Interaction with ASHA

This has been included to explore the ASHA’s role in creating links between ANC, delivery and PNC – the continuum of care – identified as important from the qualitative review. This study looked at specific roles of the ASHA such as home ANC visits, accompanying the women to the institutions for ANC and delivery, information and encouragement during the antenatal and postpartum periods, and the roles the ASHA played in influencing women to choose to access health care services. Crosstabs were also done between those who received ANC visits from a health provider and their education level, caste and monthly family income to identify what group of women are likely to revive antenatal visits and if these socio-economic characteristics influence that.

a. ASHA’s role in antenatal period

Home visits by health provider/ASHA in antenatal period: Overall, 84% of the women in the survey were visited at home by a healthcare provider in the antenatal period with slightly higher proportion of women who eventually had institutional delivery visited (87%) than those who eventually delivered at home (82%). About 40% of the women were visited four times or more, with this percentage higher in those who eventually had institutional delivery (46%) than home delivery (34%). Only 6% had one visit with the remainder having two to three visits. The percentages of those with less than four visits were higher for those with eventual home delivery than institutional delivery. For women who visited the health institution from their homes, 16% were usually accompanied to the health institution by the ASHA.

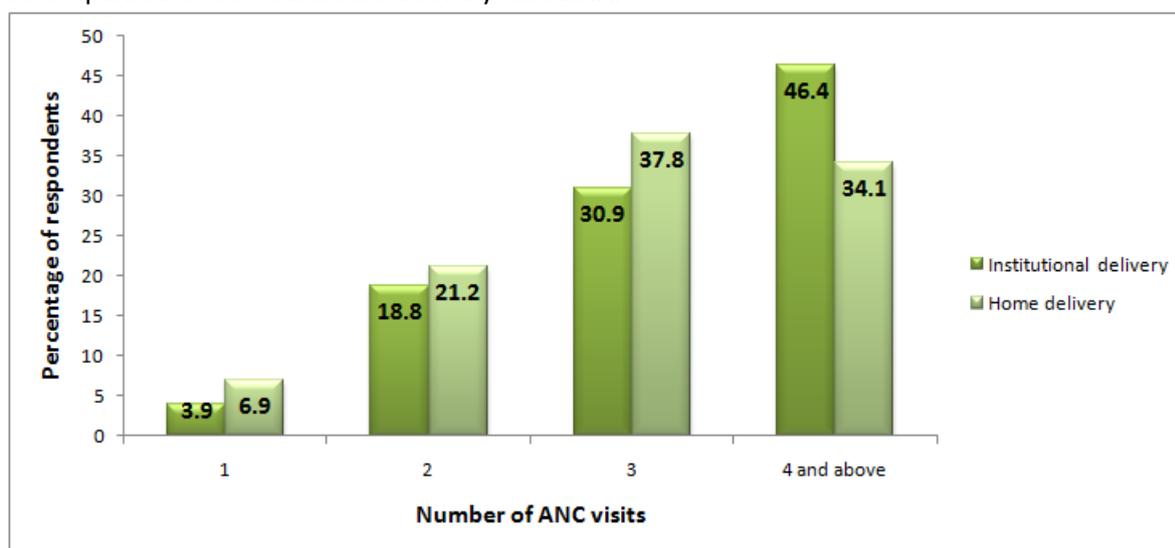


Figure 3.18. Number of ANC visits by Health Provider

Encouragement by ASHA to attend monthly clinics (Village Health and Nutrition day (VHND) / ANC clinic): A slightly higher proportion of women who delivered at an institution reported that they were encouraged by an ASHA to attend monthly ANC meetings or VHND compared to women who had home deliveries (67% against 62%). Also, 81% of women who had institutional deliveries



indicated that the ASHA helped them in accessing services such as transport, drugs, injection, etc, compared to 78% of women who delivered at home.

Issues discussed during ANC counseling by ASHAs: Of the four issues to be discussed during counseling by ASHAs - nutrition, rest for the mother, malaria prevention and familiarizing with health facility - only 'familiarizing with health facility' showed significant difference ($p < 0.05$) in discussions between respondents who eventually had institutional and home delivery. Nutrition of the mother and taking adequate rest were the two most discussed issues, both with 84% respondents reporting on these. Malaria prevention was the least discussed issue at 62%.

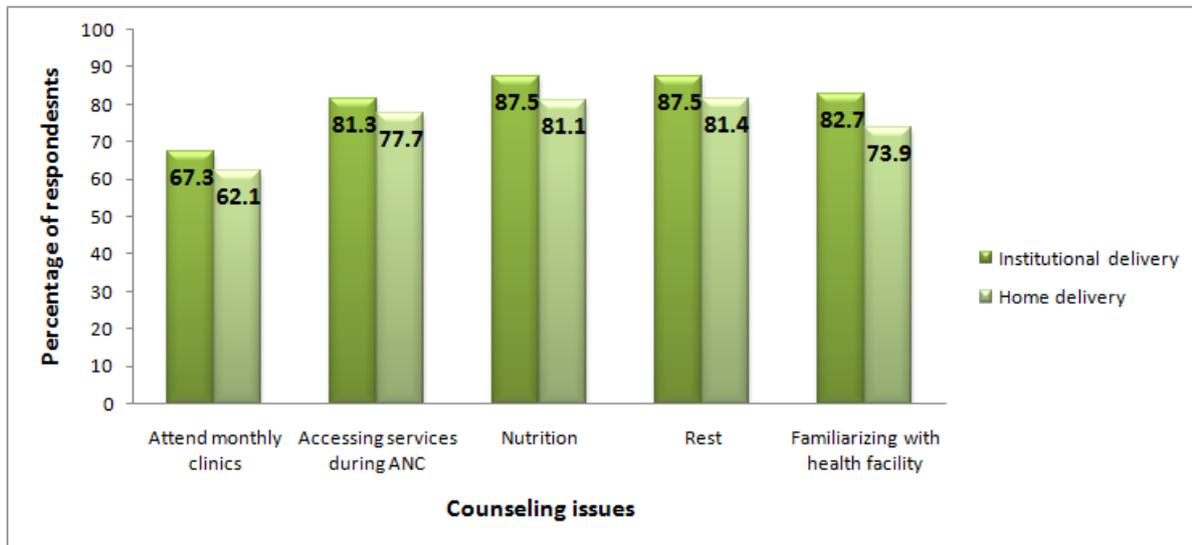


Figure 3.19. Issues discussed by ASHA during ANC

Respondent's perception of birth preparedness: Significant differences ($p < 0.05$) were observed in the percentages of women who felt adequately prepared for delivery after the antenatal period between women who eventually had institutional delivery and those with home delivery with their proportions at 93% and 88% respectively.

Role of ASHA in influencing decision to avail ANC services: Among women who had institutional deliveries, more than a third (34%) were motivated for antenatal care by the ASHA, while 40% women with home deliveries were motivated for availing ANC care by ASHA. This highlights a comparable role of ASHA in motivating women for ANC care, regardless of eventual place of delivery.

ASHA as source of JSY information: ASHA also played a crucial role in delivering JSY-related information to women. ASHA emerged as the number one source of JSY information with almost 80% of women having institutional delivery and 70% of women having home delivery acquiring their JSY knowledge from ASHA.

Association between ASHA's support in antenatal period and respondent's background characteristics: Associations were explored between ASHA's support in antenatal period and women's background characteristics to see which kind of women were more likely to be contacted by ASHAs and which kind were most likely to be left out. The analysis showed that illiterate women,



Schedule Tribes and women with average family income between INR 1000 and INR 5000 received the least visits from health providers in the antenatal period.

b. ASHA's role in supporting deliveries

In addition to the roles played by ASHAs in the antenatal period, there was further role played by them during the delivery period.

ASHA's influence on decision on place of delivery: Among women who initially intended to have institutional delivery, almost a quarter (23%) of them mentioned that the assurance they received from an ASHA/community health worker about good care at health institutions was their reason for preferring institutional delivery. This was the third most common out of 10 possible reasons in this category. The same reason was given by about a third of women who initially intended home delivery but ended up delivering at an institution; also the third most common reason in this group of women.

ASHA accompanying women to institutions for delivery: One of the key roles of ASHA is to support the woman in reaching the institution for delivery and facilitating access to care at the institution. Almost half the women with institutional deliveries (47%) were accompanied by the ASHA to the institution for delivery and in almost all of these, the ASHA assisted with their registration at the institution. For more than a quarter of institutional deliveries (27%), the ASHA was present with the woman in the delivery room.

c. ASHA's role in postnatal care

The ASHA role continued into the postnatal period, though it is remarkably lesser as compared to her role in the ANC and delivery processes. In about 10% of institutional deliveries, she was the person who first checked on the woman within 24 hours post delivery, while she did this in only about 4% of home deliveries. Furthermore, in 12% of institutional deliveries, ASHA was the person who primarily encouraged the woman in taking care of herself and her newborn in the postpartum period. However, she performed this role in only 3% of home births. In about a quarter of institutional deliveries, number of home PNC visits by ASHA was three, against 30% of home deliveries with same number of visits. This was the most common number of home PNC visits among women in the survey. There was not much difference between the percentage of institutional and home deliveries that received five or more visits from ASHA in the postpartum period with the overall percentage at 24%.

During each PNC visit, half the women with institutional deliveries felt the contact time with the ASHA was 'just enough' as against a lower proportion of 35% of those with home deliveries. The most popular view among women with home delivery was that the contact time on each visit was 'too little' (45%) with a lower proportion (28%) of institutional deliveries having same view. The frequency of PNC visits being 'too little' was similarly the most popular view among home births (48% against 30% of institutional deliveries), while half the women with institutional births again said the frequency of visits was 'just enough' against 32% of home births.



3.3.13 Outcome

Outcome as a determinant of maternal satisfaction is defined in terms of survival of any maternal illness, successful delivery and health status of the newborn (section 1.1.8.). In this study, outcome focused on the women's perceptions of their health status after the antenatal, delivery and postnatal periods, including their baby's health status. Presence of an emergency or complication at any stage of the pregnancy and postpartum period was also considered as part of 'outcome'. And also, the importance of 'outcome' in determining choice of last or future place of delivery is also explored.

Respondents' health status after ANC: About 61% of women who had an institutional delivery reported their post ANC health status as 'very good' or 'good' compared to 66% for home delivery. Almost a quarter (23%) of respondents who had an institutional delivery reported a poor or very poor health status compared to less than a fifth (18% of home deliveries). This is consistent with the hypothesis that women who perceive their health status as poor are more likely to opt for institutional delivery.

Perceived outcome and health status as reason for choice of place of delivery: Among women who initially preferred to have institutional delivery, 'perception of better pregnancy outcome with institutional delivery' was the top most reason for this preference, mentioned by almost 70% of the women. About a tenth of this group of women indicated that they preferred institutional delivery because of an underlying medical condition (which they presumed will be better managed at an institution); the seventh reason here. Almost a tenth (8%) of women who preferred home delivery mentioned that they did not perceive any health benefit of institutional delivery over home delivery and hence their preference for home delivery. This was the ninth most common reason (out of a possible 10) for preference for home delivery. That they 'developed a complication', was the most common reason for having to deliver in an institution after initially intending home delivery, as mentioned by more than three-quarters (77%) of women who fell into this category.

Emergency or complication during labor or delivery: Women with emergency or complication during labor or delivery seemed more likely to deliver in institutions as about a fifth (21%) of women with institutional delivery experienced an emergency or complication during labor or delivery, against 10% of those with home delivery.

Health status of mothers and newborns: Almost two-thirds (65%) of the women with institutional delivery reported their post delivery health status was 'good' or very good compared to 67% for home delivery. Only 5% of institutional deliveries described their health status as 'very poor' against 3% for home delivery.

For the newborn, 'good' and 'very good' were reported by 89% of those with institutional delivery against a slightly lower 87% for home delivery. 'Very poor' health status of newborn was the least reported with 2% for institutional delivery against less than one percent for home delivery.



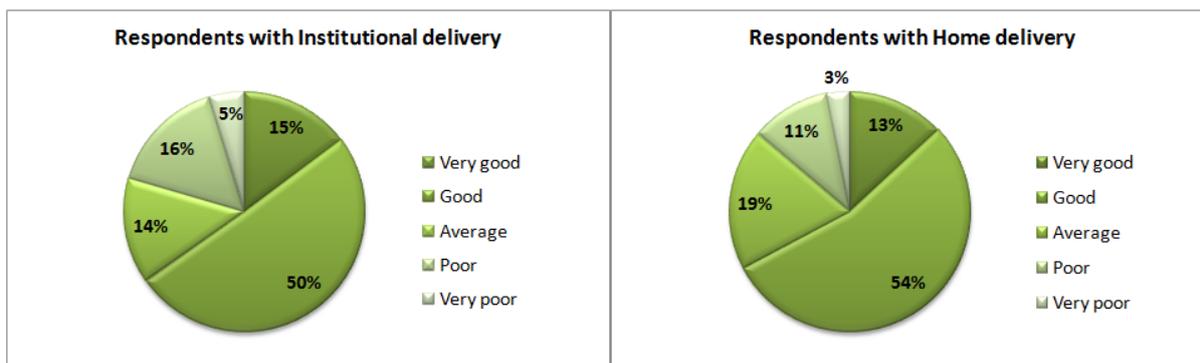


Figure 3.20. Mother's health status post delivery

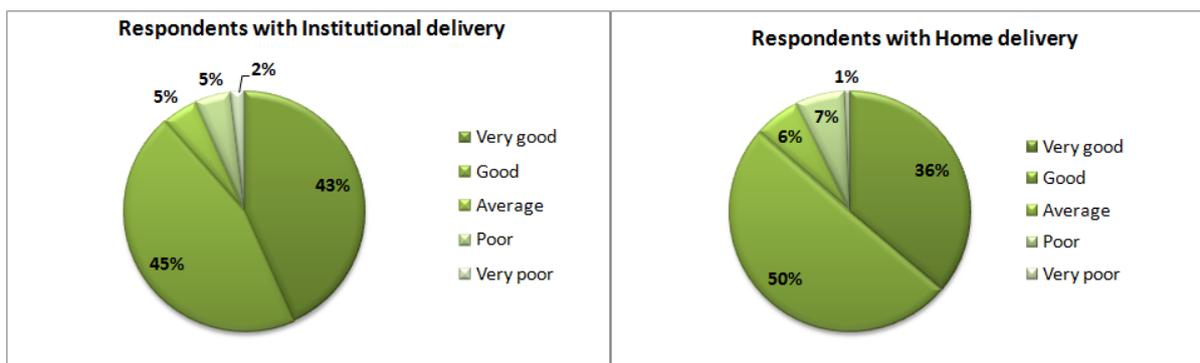


Figure 3.21. Newborn's health status post delivery

Postpartum emergency or complications: In the postpartum period, 30% of women with institutional deliveries experienced an emergency or complication against 13% for home deliveries.

Health status after postpartum period: More than two-thirds (67%) of women with institutional delivery recorded their health status after the postpartum period as 'good' or very good while slightly higher percentage (68%) recorded same for home delivery. A lower percentage of women with home delivery recorded their health status as 'very poor' (2%) compared to those with institutional delivery (4%).

For the newborn, less than one percent (0.3%) of women with home deliveries reported their newborn's health status as 'very poor' against just over one percent of women with institutional deliveries although more women reported their baby's health status as 'poor' for home delivery (6%) than institutional delivery (3%). A higher percentage of women with institutional delivery reported baby's health status as 'good' or 'very good' (89%) than those with home delivery (87%).

Perceived outcome as a reason for choice of place of next delivery: As a factor in choice of place of delivery in future, 'perceived health benefits for mother and baby' ranked the top most reason for willingness have institutional delivery, mentioned by more than half (57%) the women with previous institutional delivery and almost half those with previous home delivery (49%), the second most popular reason in this group.



For those not willing to have future institutional delivery, ‘no perceived health benefits for mother and baby’ ranked the third most common reason out of 10 by 27% of women with previous institutional delivery against 26% of those with previous home delivery as the sixth most common reason in this group.

3.4 LEVELS OF MATERNAL SATISFACTION

Levels of satisfaction with delivery care have been assessed by using the “Maternal Satisfaction Scale” developed for the study. The result was analyzed across socio-economic profile of the respondents, which included caste, education and income level.

Satisfaction level is lower in case of women who had home births than those who had delivered at the institution. But in both the groups of women the satisfaction levels is lower in case of those belonging to lower socio-economic status.

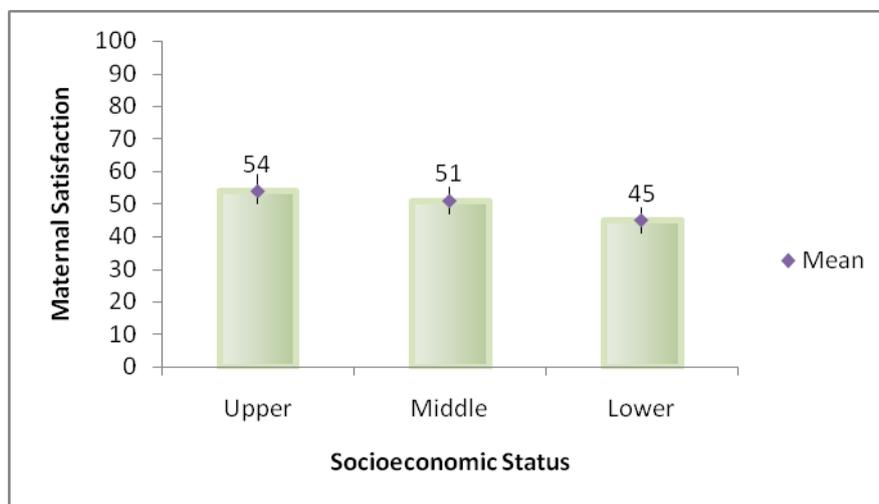


Figure 3.22. Maternal satisfaction by socioeconomic status



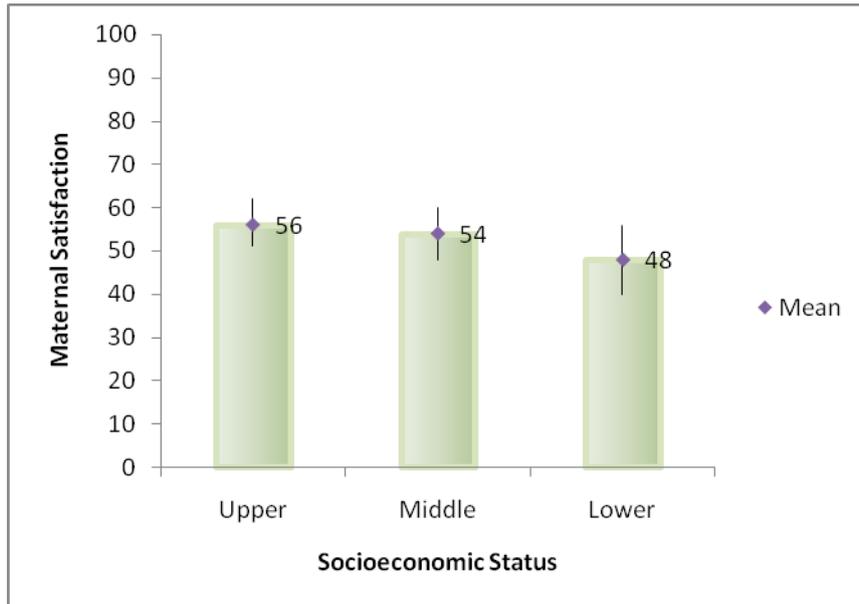


Figure 3.23. Maternal satisfaction among facility based deliveries

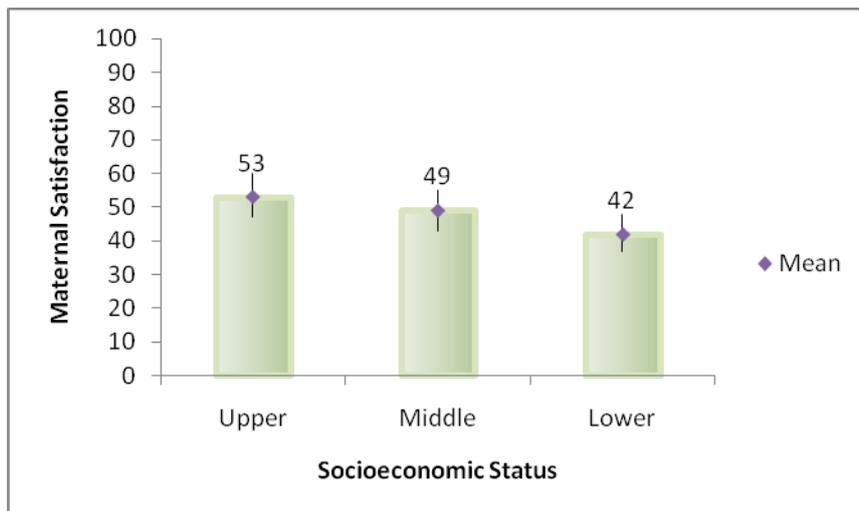


Figure 3.24. Maternal satisfaction among home based deliveries

Satisfaction with communication care for women with institutional delivery assessed based on *health advices given by provider and opportunity given to clarify doubts* is highest in those with higher socio-economic status and lowest in those with lower socio-economic status.



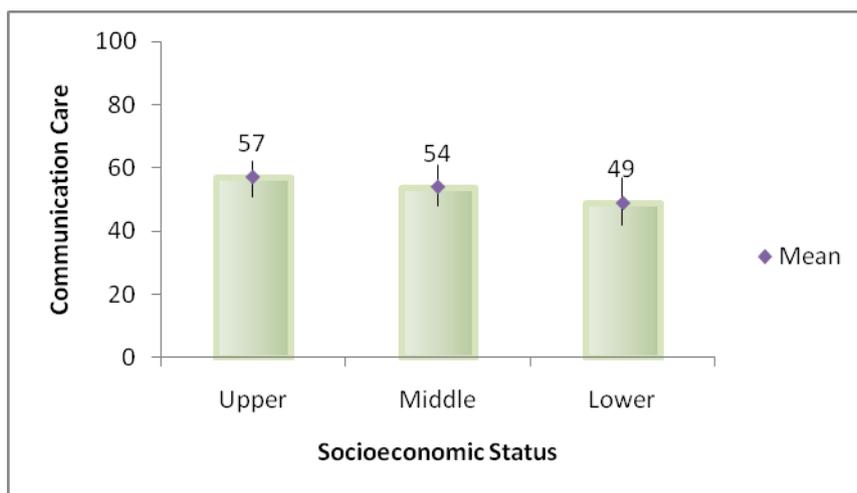


Figure 3.25. Communication care by socioeconomic status among facility based deliveries

The overall satisfaction with interpersonal care assessed based on *respect and dignity shown to patient, care of provider, time devoted to patient and competency of provider* is highest in those with higher socio-economic status and lowest in those with lower socio-economic status.

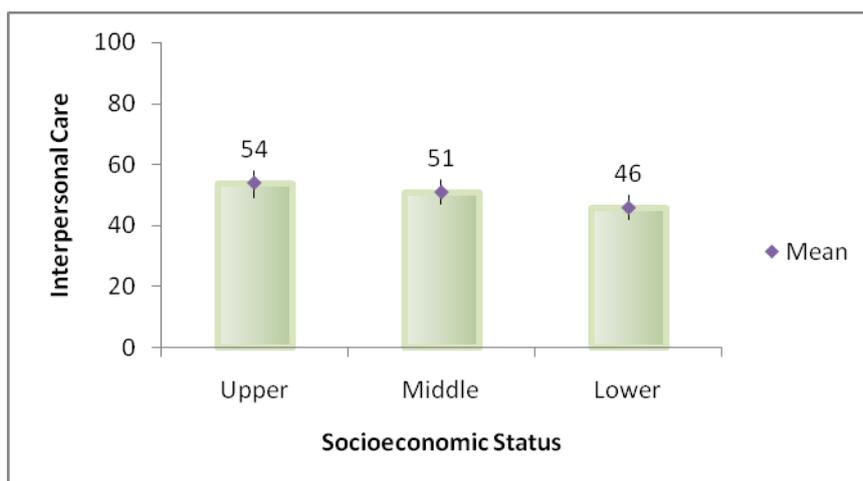


Figure 3.26. Interpersonal care by socioeconomic status

3.5 PREFERRED PLACE OF DELIVERY FOR NEXT CHILD

All respondents were asked about where they would prefer to deliver their next child, and the reasons for their preference. On the whole, 74% of the respondents said that they would prefer an institutional delivery for their next child. Among women who had an institutional delivery, 90% indicated they would want to deliver their next child in an institution, while 10% said that they would not want to do so. Among women with home delivery also, close to two-thirds (63%) said that they would want to deliver in an institution in the future, while the remaining said that they would not deliver their next child in an institution.



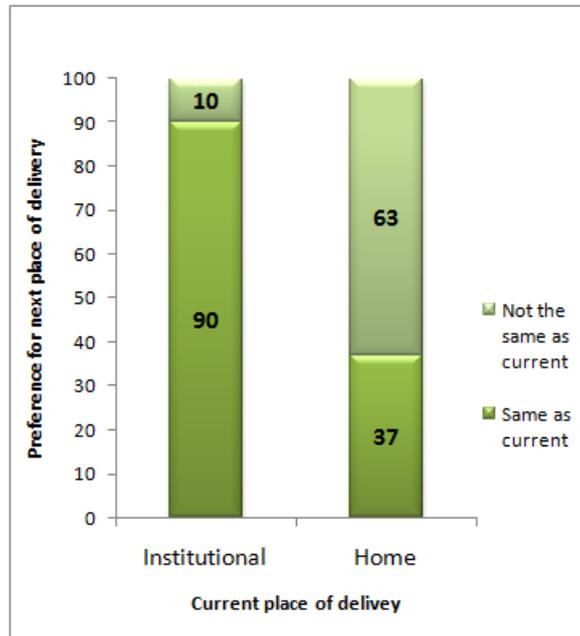


Figure 3.27. Decision regarding future place of delivery

Reasons for preferring institutional delivery in future

Two out of three women who had a home delivery would consider an institutional delivery for their next birth. (Figure 3.27) More than half such women (54%) cited good supplies as a reason for this, while about half (49%) cited perceived health benefits for themselves and their newborns as a reason (Figure 3.28). A little less than half (46%) of the women felt the cost of institutional delivery to be reasonable. About a third of the women (29%) mentioned availability of good care at facilities as a reason.

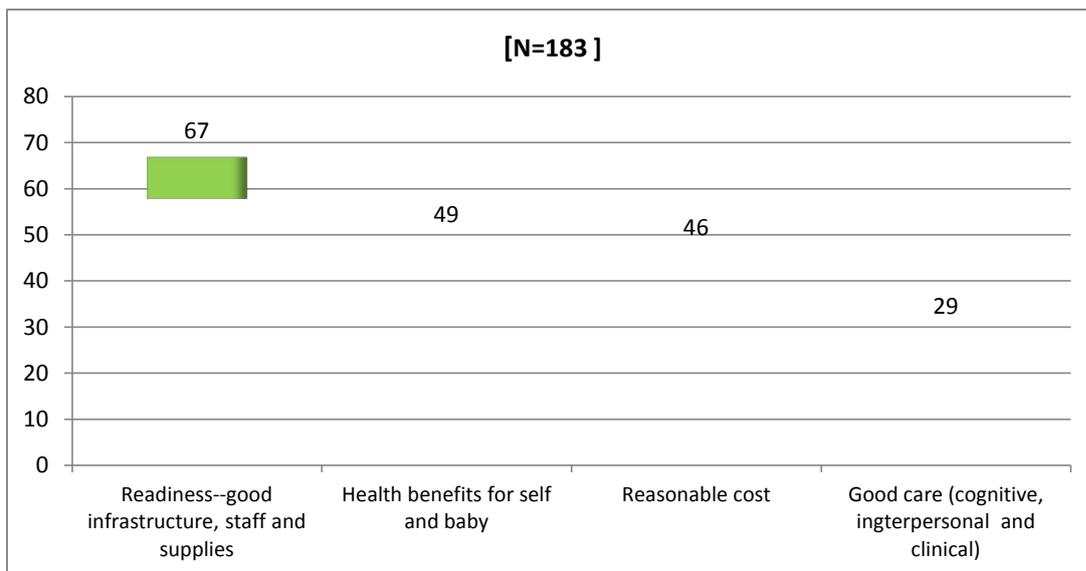


Figure 3.28. For women who delivered at home, reasons they would consider delivering in an institution in future



One third of women who delivered at home would not consider an institutional delivery in the future. (Figure 3.29) More than one third (35%) said so because they perceived poor care at the facility. A little less than a third would not consider institutional delivery on account of poor supplies in institutions. Twenty nine percent women thought that there were too many male staff at facilities and another 29% thought institutional delivery to be too expensive. Poor access was also cited as a reason for not wanting to deliver at facilities by 27% women.

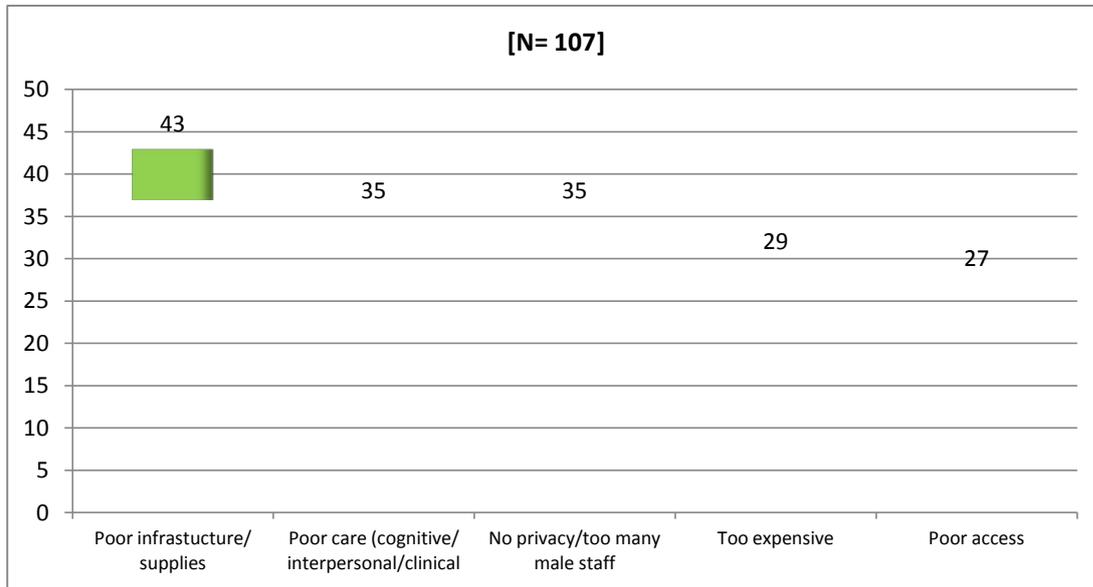


Figure 3.29. For women who had a home delivery, reasons they would not consider an institutional delivery in the future



4. DISCUSSION

4.1 Barriers Affecting Utilization of Institutional Delivery Services

The study has revealed that not all women who had a home delivery initially intended to do so. About 30% of women who initially intended to have an institutional delivery had to settle for a home delivery due to various reasons. However, more than half the women in the study initially wanted to have a home delivery with a good proportion of these going on to have one. Therefore the barriers affecting utilization of institutional delivery services, either intentionally or unintentionally are discussed here.

The results reveal that the major barriers to institutional delivery where the woman had initially intended to have an institutional delivery are transportation and time-related i.e. Accessibility; 'Lack of time to reach an institution due to unexpected delivery', 'Lack of available transport', and 'lack of other family members to help arrange for transport', were among the top reasons in this case. A multi-country analysis of demographic and health survey data (Montagu et al., 2011) from 48 developing countries had up to 27% of women indicating lack of access as their reason for delivering at home, compared to almost 90% of the women in our survey with unintentional home delivery who mentioned access-related factors as their reason. The influence of inconvenient timing of labour and opening times for institutions on women's satisfaction with services has been observed to be negative from previous studies in India and Nigeria (Banerjee, 2003; Butawa et al., 2010); but for this study, the 'unexpected delivery', which was the singular most common reason for unintentional home delivery, implies that women were perhaps not well prepared for labour rather than the institutions not being open or not being prepared to receive the women in labour. This finding was seen in a study in Malawi (Lule & Mtitimila, 1993) where the most common reason for home delivery by over half the women in the survey was that they realized too late that they were in labour, thereby suggesting that the education given at the time of antenatal counselling was failing. On the other hand it may be that there was genuinely a sudden onset or short duration of labour, as seen in studies in Nepal and Bangladesh (Sreeramareddy et al., 2006; Fronczak et al., 2007). One study in Cambodia reported cases of women misestimating their due date, in one woman, by a whole month (Matsuoka et al., 2010). In any case, proper estimation and information to women on their due dates, education on early signs of labour as well as proper transport arrangements or adequate planning should ideally take care of these factors; evidence of effectiveness of pre-planning in overcoming access barriers was highlighted in a study in Uganda (Parkhurst, Rahman, & Ssengooba, 2006). Therefore attention has to be drawn to the nature and content of interaction with a health care provider in the antenatal period. Communication in the antenatal period is vital and the lack or inadequacy of it could reduce the chances of utilization of institutional delivery services. In this study, 'Making plan/arrangements for transportation during labor', 'recognizing danger signs of serious health problems during pregnancy' and 'identifying/ making arrangements for a blood donor' were discussed to a lesser extent in the antenatal period, among those with eventual home delivery than institutional delivery. This could probably explain why 'unexpected delivery' and transport related issues are main reasons for unintentional home delivery. Women who did have an institutional delivery predominantly accessed the institution by vehicle, either paid or free and more than three-quarters were able to reach the institution within an hour although the differences in distance of the institutions from the women's houses (institutional versus home delivery groups) were not assessed in this study. However, the factors that made women with



institutional delivery better prepared for their labour could be further explored to help other women learn from their true-life experiences. In the absence of male members to help arrange transport, the ASHA could also have a prominent role in doing this. There was a significantly higher percentage of women helped by SAHIYA in accessing services who had institutional delivery than home delivery ($p=0.044$), implying that utilization of institutional delivery services may improve when the SAHIYA is more involved in helping to access services.

On the other hand, opting for home delivery due to easier access to a Dai is an important factor in women who initially intended home delivery which could suggest that irrespective of the type/level/perceived skill or competence of provider, or even outcome of pregnancy, access is important to women. A study (Kazmi, 1995) identified this convenience of access as one of the major reasons for satisfaction with home delivery by TBAs in Pakistan. In a study in Nigeria (Ebuehi & Akintujoye, 2012), over a tenth of the women used a TBA service because it was closer to their house than an institutional service. In Tanzania, availability of a TBA was also clearly stated as a reason for home delivery (Mpembeni et al., 2007). In Cambodia (Matsuoka et al., 2010), fear of delivering on the way to an institution was cited as a reason for opting for a TBA delivery further implying easier access to the TBA than the institution during labor.

Perception of better comfort and privacy was the number one overall reason for initial preference of home delivery (i.e. considering both primary and secondary reasons). Lack of ward space for resting after delivery and having to miss out on the comfort of the support from family members after delivery were cited as reasons for women hesitating to deliver in an institution in Cambodia (Matsuoka et al., 2010). Although in our study, almost 100% of the women with institutional delivery were accompanied by family members to the institution, this perception of not having family support may still have been a factor in those who opted for home delivery. However, in terms of determining future place of delivery, privacy and comfort were less of an incentive for home delivery. This could be explained by the finding that in a few women, a 'lack of space at home' suggesting less comfort and privacy pushed them into having an institutional delivery after initially intending a home delivery. Maintenance of privacy by having separate rooms or screens for delivery was a significant determinant of satisfaction with maternal health services in Bangladesh and India (Aldana, Piechulek, & Al-Sabir, 2001; Das et al., 2010; George, 2002), but in the home setting, especially in this study area where most homes have insufficient number of rooms and space for the family size, this amount of privacy may not be afforded. Nevertheless, it remains a strong consideration for home delivery.

Expenditure during delivery was on drugs and injections, tests, payments to health workers and transport. In all these categories, expenditure was higher in institutional delivery than home delivery and prior knowledge or perception of this trend may have enlightened the women's preference for home delivery on account of costs. The findings of this study suggest that costs were not always the most common factor in preferring home delivery, similar to the Mumbai study (Das S et al., 2010). However, 'reasonable costs' of accessing institutional delivery services would encourage women to have institutional delivery in this study.

Also importantly, the JSY scheme, thought to cushion the effect of the financial burden of institutional delivery, plays a role in determining initial and future preference for institutional delivery. Knowledge of JSY was the second most common reason for initial preference for



institutional delivery; but a good proportion of women with home delivery was aware of the JSY scheme before their last pregnancy and still delivered at home. This could imply that other reasons for home delivery such as privacy, closer proximity of Dai, and even costs outweigh the influence of JSY. Or it could also be due to poor planning, timing of labor, or difficulty in finding available transport, causing access-related problems to force them to deliver at home when initially intending institutional delivery. Also, the fact that even in the presence of the JSY scheme, 'too expensive' was still cited as a common reason for preference for home delivery over institutional delivery, could imply that some women may not be taking the JSY scheme into consideration when deciding on a place for delivery based on costs.

Certain observations from this study could attempt to explain this such as delay or inappropriate timing of payments (as only 10% received it on the day of delivery), women receiving less than the due amount or some not even receiving any payments at all. Less than half (46%) of women with institutional deliveries received JSY payments, which is comparable to the uptake in other high-focus states like 44% in Madhya Pradesh and 42% in Orissa (Lim et al., 2010). Only 3% of those with home deliveries in our study received a payment, compared to 8% and 7% in Sikkim and West Bengal respectively for births outside an institution (Lim et al., 2010). These could potentially lead to loss of confidence in the scheme and hence, women making birth plans irrespective of the scheme. A report has suggested that the current amount of JSY paid is adequate for the care of the mother during delivery and in the post partum period but that the timing of payments should be spread across the antenatal, intrapartum and postpartum periods to ensure the continuum of care in India (Lahariya, 2009).

In our study, a good proportion of women who had home deliveries said they would opt for institutional delivery if JSY money is assured (49%) or doubled (61%) from the due amount. This may suggest that providing assurances of being paid JSY money as at when due is important as also is perhaps increasing the amount of money paid. On the other hand, there wasn't much difference in willingness for institutional delivery with hypothetical reduction in amount of JSY money among women who initially intended institutional delivery, suggesting that other factors may be more responsible for their preference of institutional delivery than the JSY money alone.

Another important barrier is the perception of 'poor supplies' at institutions – one of the most common reasons for women being unwilling to have a future institutional delivery in this study. Availability of medicines, supplies and equipment, including emergency services at institutions has been a major source of satisfaction with institutional services from various studies in developing country contexts as much as unavailability of these has been a source of dissatisfaction. See the literature review.. Perception of poor equipment and supplies is a reason for women actually avoiding institutional delivery in Cambodia (Matsuoka et al., 2010). The initial qualitative survey for this study supports this, as it revealed that availability of supplies is important to women in determining their utilization of institutional delivery services. Relating this to costs, availability of supplies for free was a major attraction for institutional delivery according to some of the respondents in the qualitative survey, and a proportion of women were not too impressed on realizing they had to pay for some of these supplies or buy them from outside the institution. Therefore this may explain why women ranked 'poor supplies' high, as a deterrent to future institutional delivery. In addition, the perception of 'no perceived health benefits' of institutional over home delivery, though not a very strong determinant on its own, is still found among some



women in the survey and combined with high costs and perception of poor supplies at institutions, creates a strong barrier to utilization of institutional services.

Having 'no one to look after other children at home' emerged a strong reason keeping women from going to institutions for delivery. Similar reason was found in Mumbai (Das S et al., 2010). This again could probably be dealt with by better planning and more family involvement during the pregnancy period.

Family/husband decision to have home delivery also came out as a common barrier to institutional delivery although it was not clear from this study whether the women had different preferences for place of delivery from their husbands or other family members. A study on the influence of religion and region on women's autonomy in India and Pakistan, findings suggested that South Asian women are largely left out of family decision making; have limited access to, and control over resources; have restricted freedom of movement; with many exposed to threat and violence from their husbands (Jeejeebhoy & Sathar, 2001). If this is applicable in Jharkand, then it could explain better, the influence of family on the eventual choice of place of delivery. But further studies may be needed to explore this properly.

The most common reason for women not wishing to have a future institutional delivery was the perception of poor care at institutions. This was assessed in terms of communication from providers, emotional support, interpersonal care including attitudes of providers to patients, and perceived skill level of providers. Fear of abusive behavior by staff and fear of procedures/instruments at institutions were less significant barriers to preference of institutional delivery. This view may have been due to experiences the women had with a previous delivery or from hearsay from other women. In any case, previous studies in India have highlighted perception of poor quality of services especially with regards to harsh treatment by staff, as a deterrent to utilization of institutional delivery services (Nagdeve, 2010; Barnes, 2007); sometimes causing women to specifically avoid or delay going to institutions where they have experienced bad treatment previously, even if they have a complication (Sudhakaram, 2009). Many more studies in different developing countries have highlighted the influence of interpersonal interaction with patients on their satisfaction with services.

It was observed in our study that a higher percentage of women reported experience of bad behaviour from staff during institutional delivery than home delivery. In the antenatal period, report of bad behaviour from provider was more with women who went on to have home delivery than institutional delivery and there were some reports of bad behaviour from institution staff in the postpartum period as well. This could well be a reason for women avoiding future institutional delivery. Fear of abusive behaviour from staff, though a less prominent reason for preference for home delivery as stated earlier was still mentioned by about 14% of women and could be a reason for hesitation or avoidance of institutional delivery as seen in previous study (Matsuoka et al., 2010). Experience of bad behaviour from staff was significantly associated with having low monthly income of less than INR1000 and having 'no schooling' but not associated with caste. This may imply to an extent that women with lower social class may be at more risk of bad treatment from staff. Social differentiation has been shown to negatively affect health-seeking behaviour according to a study in Bolivia, where it was observed that women who felt socially marginalized, customarily were those



who opted to deliver at home and even delay seeking medical attention when in emergency (Roost et al., 2009).

Finally, the presence of male staff at institutions was a strong reason for avoidance of institutional delivery in future although it was the least common reason for women preferring home delivery initially before giving birth. Studies in developing country contexts have shown preference for female providers as a strong determinant of satisfaction as women are thought to be more sensitive and patient during consultations and examinations (Butawa et al., 2010; George, 2002; Nigenda et al., 2003). However some women would still choose the safety of institutional births even if by male providers, over the comfort of home births (Kabakian-Khasholian et al., 2000). Further research may be needed on this.

4.2 Satisfaction with Maternal Health Services

In most determinants of maternal satisfaction, levels of satisfaction were observed to be higher in institutional deliveries than home deliveries except in certain specific groups of women which will be discussed subsequently. However there is still some degree of dissatisfaction with institutional delivery services which other previous studies both in Jharkand and India generally have observed (Refer to chapter one). The higher satisfaction with institutional delivery than home delivery services may be an indication of improvement in institutional delivery services but should be interpreted with caution.

SES Pattern

The overall maternal satisfaction, as well as satisfaction in two specific areas (Communication and Interpersonal care), were weighed against the socioeconomic status of respondents. The findings that satisfaction levels were generally higher in those of higher socioeconomic status and lowest in the lower class somewhat vary from findings in previous studies. For example, minority groups in a Sri Lankan study were observed to have higher levels of satisfaction with services (Senarath, Fernando, & Rodrigo, 2006), while women with low literacy levels in Nigeria and India considered quality of institutional services to be more satisfactory compared to more educated women (Oladapo, Iyanwura, & Sule-Odu, 2008; Das et al. 2010). While low levels of awareness and realization of deficiencies in services due to illiteracy could explain the findings in illiterate women, the findings in minority groups had no explanation.

Differences in Levels of Satisfaction between Home and institutional delivery

Birth preparedness has been considered an important and useful intervention in improving maternal health by WHO and other agencies. Women in our study had reported receiving birth preparedness advice in the antenatal period and their birth preparedness was weighed against their degree of satisfaction with overall, communication and interpersonal care.

In women with Institutional Delivery, overall satisfaction levels as well as those for communication and interpersonal care were higher for those with no birth preparedness than those with low to moderate birth preparedness though still highest in those with high birth preparedness. An explanation could be that those with no birth preparedness had fewer expectations and so were able to appreciate institutional services better. Perhaps expectations of those with some birth preparedness were not met as much as they would have wanted it to. The relationship between



expectations and satisfaction with services has been explored in various studies and literature, most of which propose that the lower the expectation, the higher the satisfaction (Ware & Synder, 1983; Hasan, 2007; Aldana, Piechulek, & Al-Sabir, 2001). A study using educational level as a proxy to expectation level showed lower satisfaction with services in patients with some education (Bleich, Özaltın & Murray, 2009). Therefore women with some communication or contact with health providers, being more enlightened than those without, may equally have raised expectations of care and therefore lower satisfaction. However further studies will be needed to interpret this relationship between expectation and satisfaction here better.

For women with home delivery, a steep fall in satisfaction level between low birth preparedness and no birth preparedness could be because those with no birth preparedness may have had more bad or negative experiences during labour and delivery and perhaps found the process more difficult than those with some birth preparedness. But again, this would have to be explored in more detail.

Regarding *postnatal education*, women who had institutional deliveries showed a steep fall in overall satisfaction level for those with no postnatal advice. It could be that having delivered in an institution and believing they would get the best of care and advice extending into the postnatal period, these expectations were not met. Perhaps women with institutional delivery demand more in terms of postnatal care and advice and hence are less satisfied when this did not happen. For satisfaction with communication care, the trends between those with low advice and no advice for institutional delivery and home delivery were similar to those already described for birth preparedness. However for satisfaction with Interpersonal Care by Postnatal Education, women with institutional delivery showed satisfaction levels fluctuating with different degrees of postnatal advice. This unsteady trend makes the influence of postnatal education on satisfaction with interpersonal care somewhat difficult to interpret but could suggest postnatal advice may not matter as much in determining satisfaction with interpersonal care in institutional deliveries.

For women who had home deliveries, satisfaction levels decline with declining level of postnatal advice with a steep fall between 'middle to full' and 'no to low' postnatal advice. This could signify that perhaps in home deliveries postnatal advice matters more to satisfaction with interpersonal care than in institutional deliveries. Having a health care provider visit women at home and offer postnatal advice (especially after opting for a home delivery) may make women feel more cared for.

Regarding JSY remuneration, maternal satisfaction levels were higher in all determinants in those who received JSY benefit than in those who did not receive any benefit. This signifies the importance of women's receipt of JSY payments on their satisfaction levels in this study. JSY payments may not have been the primary reason for wanting to deliver in an institution but the results suggest it matters to women's satisfaction all the same.

In terms of ANC expenditure, overall satisfaction level was highest in those who had low ANC expenditure and not in those with 'no expenditure' as one would naturally expect. This finding could imply that low to moderate expenses are acceptable to women if they must receive the best standard of care; and having to spend nothing on pregnancy is not necessarily a prerequisite for satisfaction. As probably expected though, overall satisfaction was least in those with high expenditure. As already discussed earlier in the report, cost or monetary related issues were not always the commonest reasons for avoidance or preference of institutional or home delivery. An important observation seen with regards to satisfaction with interpersonal care is that the highest



levels of satisfaction were also among those with low to moderate levels of expenditure, followed by those with high expenditure and least in those with no expenditure. Therefore satisfaction could still be low even if women have spent nothing on the service. It may mean that the quality of interpersonal care matters more to women than the impact of expenditure/costs in determining their satisfaction. It may also be simply that women who have not paid for certain services, have therefore not received these services which, if they had, would have made their satisfaction level higher. The result though, questions whether providers respond to patient payments and treat them accordingly. This may require further exploration.

Looking at satisfaction with outcome of care where the highest level of satisfaction is in those with no expenditure while lowest is in those with high expenditure, the difference in level of satisfaction between these two groups of women was substantial. The implication of this could be that there may indeed be considerable impact of costs/expenditure on ANC on satisfaction when it comes to the overall outcome of care in terms of mother and baby's health. Women may be most satisfied when they can spend little or nothing and yet have the best possible outcome of pregnancy irrespective of other experiences in between.

Finally, overall satisfaction level generally declined from those with 'full monetary gain' to 'no monetary gain'. In all determinants assessed, lowest satisfaction was found among those with no monetary gain calling into question, financial motives for utilization of services.

However, the highest level of satisfaction with interpersonal care was among those with mild to moderate monetary gain, followed by those with full gain. This suggests that when it comes to interpersonal care, although absence of monetary gain may hinder women's satisfaction, having full monetary gain is not necessarily a prerequisite for optimal satisfaction. It further highlights the importance of good interpersonal care to women's satisfaction. The findings also suggest that some trade off between expenditure and financial compensation is acceptable to women.

Women with mild to moderate monetary gain had the highest levels of satisfaction with outcome of care again implying that some degree of financial trade off is acceptable to women so long as the outcome of care is positive.



5. RECOMMENDATIONS AND FUTURE RESEARCH AREAS

5.1 RECOMMENDATIONS

Based on the findings of this study the recommendations we make are discussed below.

Improve birth preparedness: Lack of birth preparedness has emerged a major factor hindering women from reaching institutions for delivery. In a scenario like Jharkhand, where accessibility is a major hurdle, birth preparedness is crucial for preventing unplanned home births and maternal /newborn morbidity or mortality. Managers need to look more into the issue of birth preparedness counselling. Full counselling with all the components and indicators of birth preparedness should be offered to all women. This will also enhance overall satisfaction with services thereby promoting future utilization of services.

Being the most likely source of birth preparedness education and assistance, ASHAs need to be oriented to providing birth preparedness information and counselling. Understanding labor pain, particularly identifying false pain and danger signs, therefore emerges as a critical training area for ASHAs. Making arrangements for someone to look after other children at home during labor should also be considered in birth preparedness. Strategies for assisting women to remember their due date should also be incorporated in the antenatal care that women receive.

Social networks among pregnant and recently delivered women may help by sharing real-life experiences and information on birth preparedness which others can benefit from.

Improve emergency transport services: In an area like Jharkhand where physical accessibility is indeed a major hurdle to institutional care, initiative such as the emergency transport (Mamta Vahan in Jharkhand) scheme is very relevant and highly appreciable. In such a scenario, the health system must stress on providing emergency transport in poor coverage areas, and assisting ASHAs in arranging vehicles for emergencies and particularly during night.

Wider efforts aimed at improving access to institutional services such as creating better roads, public transport and communication networks should be stepped up.

Address community fears regarding institutional deliveries and ensure better interpersonal care: A critical need is to address community fears, such as fear of abuse or of clinical procedures conducted during delivery, which prevents women from accessing institutional maternity care. Such problems possibly arise from negative experiences of abuse and also because of lack of effective communication between providers and patients. While on the one hand community fears need to be dispelled, on the other hand providers also need to be sensitized about respectful behavior towards patients and explanation of procedures that could eliminate fears and misconceptions from women's minds.

Institutions should be made more user-friendly and providers should be well educated in the topics they discuss during counseling to avoid giving incomplete information as well, which negatively affects satisfaction levels. Standards of care should be uniform irrespective of social class.

Privacy and emotional support during institutional deliveries: One of the major reasons behind preference for home deliveries was the benefit of privacy and emotional support through presence



of family members during delivery. To provide similar comfort in institutional deliveries, privacy should be ensured in labor rooms and seclusion should be maintained in the area. Allowing female birth companions in the labor room during delivery will also help provide support and comfort to the woman and help make institutional deliveries more acceptable to the community.

Curb on buying medicines, conducting tests and informal payments at the institution: The findings show that the median expenditure for women who had institutional deliveries (INR 1050) was higher than for those who had home deliveries (INR 600). The bulk of the expenditure was on drugs and injections and also informal payment to the facility staff. While monetary incentive was a major reason for utilizing institutions, women spending a significant amount for the services that are supposed to be free can deter them from institutional delivery. Monetary incentives under JSY will cease to hold any meaning and ultimately will not have any positive effect on institutional deliveries.

Efforts should be made to reduce costs to moderate levels and make expenses and all user fees for different types of maternal services transparent, so families can plan their expenditure during pregnancy and make informed delivery choices.

JSY coverage should be expanded as many women are still not receiving these payments. In addition, efforts should be made to assure women that they will receive these payments in a timely manner. Starting the payments from the antenatal period through to the postpartum period may show some intent on the part of the government and provide some assurance of this, probably making women feel more confident about the scheme and encouraging them to access institutions for delivery.

Support TBAs in their role in maternity care: In regions like Jharkhand, home deliveries cannot be totally eliminated in the near future because physical access and cultural acceptability continue to be significant barriers to institutional care. As TBAs play a key role for home births, their orientation toward ensuring safe deliveries is important for saving maternal and newborn lives. TBAs, with their formidable presence in rural areas and their social acceptability, can play a crucial role in ensuring safer home births and postnatal care.

Provision of quality services at the institution: Community perceives better pregnancy outcome in the institution; this is further reinforced by ASHA's assurance of quality care at the institution. Accordingly if 'good' quality services, including treatment by skilled staff, provision of medicines and appropriate clinical as well as interpersonal care are provided to women visiting institutions for deliveries, they can sustain the demand for institutional care and can accomplish the JSY goal of providing quality institutional births.

Improve services for women opting for home deliveries, and for those belonging to low socio-economic strata: The respondents were asked about where they would prefer to deliver their next child. Among women who had an institutional delivery, 90% of them indicated they would want to deliver their next child in an institution. But 37% of women who had delivered at home still want their next birth to be at home. So the biggest challenge will be to address the issues, which are key from women's perspective in order to a) improve the safety of those who choose to give birth at home and b) to decrease the barriers for these women to choose institutional deliveries. Moreover as level of maternal satisfaction is lower in case of women belonging to low socio-economic strata (SC/ST/OBC, women with low education level and BPL category), service provision catering to their expectation, needs special emphasis.



Ensure Continuum of Care: Women who had institutional deliveries showed less satisfaction when they had no postnatal advice. Therefore program managers should ensure that postnatal follow-up remains constant and of high quality regardless of where women choose to deliver.

5.2 FUTURE RESEARCH AREAS

Areas that require further exploration are discussed below.

While it is suggested from studies that **antenatal exposure** to health services may increase the chances of institutional delivery, further research to explore this in Jharkhand is needed.

Low level of **women's autonomy and decision making power** in a setting like Jharkhand could be a factor in choice of place of delivery from our results but as it was not properly ascertained whether the women had different preferences for place of delivery from their husbands or family members, further study to explore this true influence of family decision on eventual choice of place of delivery may be needed.

Presence of male staff at institutions seemed to put women off institutional delivery to an extent from our study but this has not been explored properly and the true influence of male gender on utilization of institutional delivery services remains unclear. This is also an area for further exploration.

Patient expectations have been linked to satisfaction and have come up in our study. The women who had some communication or contact with health providers may have had raised expectations of care and therefore lower satisfaction. Studies to explore this expectation/satisfaction relationship better are needed, if possible, so that a picture of what women actually expect from their health services can be obtained. This could give managers some direction on where to concentrate efforts at quality improvement.

Experience of bad behavior from staff repeatedly emerged important in determining women's satisfaction with services and as this deters women from utilizing institutional services, it may be important to explore this in detail. If this is found to be significant, it will be a very delicate issue to tackle in order to maintain the ethics of the medical profession, promote a good image of institutional services and encourage their utilization. Also as women who had no antenatal expenditure were least satisfied with interpersonal care, further exploration should be done to determine if providers do treat women based on their knowledge of whether the women have paid for the service or not.



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APPENDIX

i. Questionnaire for Quantitative Survey

Introduction story: Namaste. We are from an organization- PHFI in Delhi. Our organization studies health related problems faced by people in India. We are studying types of services that women like you have received during pregnancy and delivery given by Sahiya, Nurse, and Dai. Women in your village and the community around you would also be using these facilities for their deliveries or you may also use the facilities for your next delivery. The information provided by you on your experience will help in finding out how your experience and that of other women/ your friends/ other women in your family in the community can be made better. This is to help you and other women in your community to have a better health and healthy baby.

ID Number: _____

Name of respondent: _____

Date of Interview: _____

Address of respondent: _____

Name of interviewer: _____

GENERAL INFORMATION				
Sl.No	Question	Coding Categories	Skip to	Answers
1.	What is your age?			
2.	What is your Religion?	01 Hindu 02 Muslim 03 Christian 04 Traditional 05 Other		
3.	What is your Caste?	01 General 02 SC 03 ST 04 OBC		
4.	What is your education level?	01 Illiterate 02 can read and write 03 Attended school		
5.	Total years of schooling Exact years			
6.	Monthly income	01 Less than 1000 02 1000-5000 03 5001-10000 04 10000-50000 05 50000+		
7.	Type of Family Definitions : Nuclear: Living with only Husband and children Extended: Living with in- laws/ parents and other family members	01 Nuclear 02 Extended		
8.	Family/household size Exact Number			
9.	No. of pregnancies (including live birth, miscarriage and still birth)			
10.	Number of living children			
11.	Outcome of last pregnancy	01 Live birth 02 Still birth		
12.	i. Current status of newborn : Alive ii Sex of the newborn	01 Yes 02 No 01 Male 02 Female		
13.	Date of last delivery (mm/yy)			



For your last pregnancy				
14	Did you receive any Antenatal care? User: Those received service from health system provider (doctor, nurse, ANM, ASHA) Non user : received service from Dai, family members	01 Yes 02 No	Based on user and non user fill ANC section	
15	Where did you deliver?	01 Facility 02 Home		
16	Did you receive postnatal care? User: Those received service from health system provider (doctor, nurse, ANM, ASHA) Non user : received service from Dai, family members	01 Yes 02 No	Based on user and non user fill PNC section	
17	Interview	01 Agreed 02 Refused		
18	Reason for refusal			

ANTENATAL CARE				
User: Those received service from health system provider (doctor, nurse, ANM, ASHA) Non user : received service from Dai, family members				
<i>[ANC Users only]</i>				
#	Question	Coding Categories	Skip to	Answers
Background Information				
19	Who did you receive Antenatal care from? Note only the primary care provider and prompt the option	01 Doctor- Public Health facility 02 Doctor- Private 03 Nurse 04 ANM 05 SAHIYA 06 Dai 07 Other (Specify)		
20	When was your first ANC check-up at health facility?	01 1-3 months of pregnancy 02 4-6 months of pregnancy 03 7-9 months of pregnancy		
21	How many times did you visit a health facility for ANC check-up? Exact no.			
22	How many times did a health professional/SAHIYA visit you during the antenatal period Exact no.			
Accessibility of health facility [ANC Users Only]				
23	What type/level of facility was this? Note only the facility she visited most for ANC	01 Anganwadi centre 02 Health- sub-centre 03 PHC 04 CHC / FRU 05 District hospital 06 Private facility		
24	How did you usually get to this facility?	01 On foot 02 Vehicle (paid) 03 Vehicle (free)		
25	How long did it usually take you to reach this facility?	01 More than 2hrs 02 1hr to 2hrs 03 30mins to 1hr 04 Less than 30mins		
Structure <i>[ANC Users Only]</i>				
26	Did the health facility appear well cleaned?	01 Yes 02 No		
Supplies [ANC users Only]				



27	How much did you have to pay for:			
	i. Transport			
	ii. Drugs and Injections			
	iii. Tests			
	iv. Consultation			
	vi. Other costs (specify)			
28	Were you given any cash benefit for registering for your ANC?	01 Yes 02 No		-29 -30
29	How much did you receive? Exact amount			
Human Resources [ANC users Only]				
30	Who usually attended you for facility ANC? Note only the primary care provider and prompt the option	01 ANM 02 Doctor 03 Nurse 04 Anganwadi worker 05 Other (specify)		
Emotional Support [ANC Users Only]				
31	Who usually accompanied you to the facility? Prompt the option	01 Husband 02 Other family member(s) 03 Friend(s)/Neighbour(s) 04 SAHIYA 05 Went Alone 06 Other (Specify)		
32	Were you made to feel comfortable by all the staff at the facility?	01 Yes 02 No		
33	What was the gender of the staff who usually attended to you during your visits? Note the gender of primary care provider	01 Male 02 Female		
Cognitive Support [ANC Users Only]				
34	Did the health professional (doctor, nurse or midwife) or SAHIYA ever discuss with you on Birth preparedness:			
	i. Maintaining frequency of your ANC visits (at least four times during pregnancy)	01 Yes 02 No		
	ii. Identifying a skilled provider and making arrangements for delivery of your child	01 Yes 02 No		
	iii. Making a plan/arrangements for transportation to a facility during labour	01 Yes 02 No		
	v. Recognising danger signs of serious health problems during pregnancy, childbirth or soon after	01 Yes 02 No		
	vi. Knowing where to go and what community resources such as emergency transport, funds, communications are available in case of emergencies	01 Yes 02 No		
	vii. Identifying and making arrangements for a blood donor	01 Yes 02 No		
	viii Information about benefit of JSY and associated monetary benefit	01 Yes 02 No		
35	Do you think the entire information is/was adequate to your needs?	01 Yes 02 No		
36	Did the health professional (doctor,	01 Yes		



	nurse or midwife) or SAHIYA seem willing to answer any questions you may have had?	02 No		
Promptness [ANC Users Only]				
37	How long did you usually have to wait before seeing your provider?	01 0-15 minutes 02 15-30 minutes 03 30mins to 1hr 04 More than 1hr		
38	Were you satisfied with the time you usually had to wait to be seen?	01 Yes 02 No		
Confidentiality and Privacy [ANC Users Only]				
39	Were you satisfied with the amount of privacy and confidentiality you were offered during your visits?	01 Yes 02 No		
Inter-personal aspect of care [ANC Users Only]				
40	Did any staff ever speak to you in a way that upset you? (e.g. shouting, using abusive language)	01 Yes 02 No		
41	Did you feel comfortable/free to discuss all your concerns with your provider?	01 Yes 02 No	If no, ask 42	
42	If no, what do you think would have made you more comfortable with your provider	01 female gender 02 male gender (refer to 33) 03 someone I am familiar with 04 someone more friendly 05 other _____		
Continuum of care/Interaction with SAHIYA [ANC Users only]				
43	Did your SAHIYA ever encourage you to attend monthly clinics, (VHND, ANC etc)	01 Yes 02 No		
44	Did your SAHIYA ever help you in accessing services (transport, getting drugs and injections etc) during your ANC?	01 Yes 02 No		
45	Did your SAHIYA ever discuss with you and your family on:			
	i. Nutrition	01 Yes 02 No		
	ii. Rest	01 Yes 02 No		
	iii. Protection from malaria	01 Yes 02 No		
	iv. familiarizing yourself with facility	01 Yes 02 No		
46	Did you feel adequately prepared for your delivery after your entire ANC	01 Yes 02 No		
Outcome [ANC Users 47,48 and Non-Users, 47, 49]				
47	How would you rate your health after the antenatal period?	01 Very good 02 Good 03 Average 04 Poor 05 Very poor		
48	What made you decide to attend ANC for your pregnancy? First ask her un-promptly and based on her response note the primary and secondary reason. If she is unable to answer, prompt the	01 Perceived benefits of ANC on pregnancy outcome from personal experience 02 Perceived benefits of ANC on pregnancy outcome from experience of other women		



	response.	03 Husband/family decision 04 Based on information by SAHIYA 05 Assurance from community health worker/SAHIYA about good care at facility 06 Awareness of cash benefit for registration for ANC/MJSSA-JSY scheme 07 Because of a health condition 08 Other (specify) _____		
	Primary reason			
	Secondary reason			
49	<p>Why did you not attend ANC for your pregnancy?</p> <p>First ask her un-promptly and based on her response note the primary and secondary reason. If she is unable to answer, prompt the response.</p>	01 No knowledge of health benefit of ANC 02 Place was too far and no transport 03 No one to accompany me 04 No one to look after other children at home 05 Too expensive to attend 06 Presence of male staff at facility 07 Fear of abusive behaviour / scolding by provider 08 No privacy 09 Other: (specify) _____		
	Primary reason			
	Secondary reason			

INTRAPARTUM CARE (Check 15)					
#	Question	Coding Categories		Skip to	Answers
Intentional Place of delivery <i>[For both Home and Facility delivery]</i>					
50	Place of delivery		Intention	Actual	-51 -51, 52 -53, 54 -53
		01	Facility	Facility	
		02	Facility	Home	
		03	Home	Facility	
		04	Home	Home	
If woman initially intended Facility delivery					
51	<p>What were your reasons for wanting to deliver in a facility?</p> <p>First ask her un-promptly and based on her response note the primary and secondary reason. If she is unable to answer, prompt the response.</p>	01	Perception of better pregnancy outcome with institutional delivery		
		02	Quick referral in case of emergency		
		03	Presence of doctors and nurses at the facilities		
		04	Adequate resources (medicine)		
		05	Husband/family decision		



		06 Assurance from community health worker/SAHIYA about good care at facility 07 Awareness of cash benefit institutional delivery[MJSSA-JSY scheme] 08 Centre near home 09 Lack of space at home 10 Because of a health condition 11 Other _____		
	Primary reason			
	Secondary reason			
If original intention was Facility delivery but woman ended up delivering at Home				
52	How did you end up delivering at home? First ask her un-promptly and based on her response note the primary and secondary reason. If she is unable to answer, prompt the response.	01 Unexpected delivery so there was no time 02 There was no available transport 03 Absence of male /family members who could have helped arrange for transport 04 Was too weak and so could not go to facility to deliver 05 Other: _____		
	Primary reason			
	Secondary reason			
If woman initially intended Home delivery				
53	Why did you prefer home delivery? First ask her un-promptly and based on her response note the primary and secondary reason. If she is unable to answer, prompt the response.	01 No perceived health benefit of institutional delivery over home delivery 02 Dai lives close enough to my home 03 Husband/family decision 04 Too expensive to access 05 Presence of male staff at facility 06 Fear of abusive behaviour / scolding by provider 07 Fear of clinical interventions like injections and instrumentation 08 Unsure about availability of transport at night 09 Better comfort and privacy with home delivery 10 No one to look after other children at home 11 Other: _____		
	Primary reason			
	Secondary reason			
If original intention was Home delivery but woman ended up delivering at a Facility				
54	Why did you end up delivering at the facility? First ask her un-promptly and based on her response note the primary and	01 Dai was unavailable 02 Developed a complication 03 Husband/family decision 04 Assurance from community		



	secondary reason. If she is unable to answer, prompt the response.	health worker/SAHIYA about good care at facility 05 Lack of space at home 06 Other _____		
	Primary reason			
	Secondary reason			
55	Who primarily conducted your delivery?	01 Doctor 02 Nurse 03 ANM 04 Dai 05 Family member 06 Friend/Neighbour 07 Other (Specify)		
Accessibility of health facility <i>(Facility Delivery Only)</i>				
56	What type/level of facility was this?	01 Government- sub-centre 02 PHC 03 CHC 04 District hospital		
57	How did you get to this facility?	01 On foot 02 Vehicle (paid) 03 Vehicle (free)		
58	How long did it take you to reach this facility?	01 More than 2hrs 02 1hr to 2hrs 03 30mins to 1hr 04 Less than 30mins		
59	Is the facility easily accessible at night (or in emergency)?	01 Yes 02 No		
Structure <i>[Facility Delivery only]</i>				
60	Did the structure appear well maintained?	01 Yes 02 No		
61	Were toilets clean for patient use?	01 Yes 02 No		
62	Was there a clean delivery table in the labour/delivery room?	01 Yes 02 No		
Supplies <i>[Both Home and Facility Delivery]</i>				
63	How much did you have to pay?			
	i. Transportation			
	ii. Drugs and Injections			
	iii. Tests			
	v. Payment to Staff			
	vi. Other			
Human Resources <i>[Facility delivery only]</i>				
64	On your arrival was there a doctor at the facility?	01 Yes 02 No		
65	On your arrival Was there a nurse/ ANM at the facility?	01 Yes 02 No		
Emotional Support <i>[Facility delivery: only]</i>				



66	Who accompanied you to the facility?	01 SAHIYA 02 family/friend 03 Husband 04 None		
67	Did your SAHIYA assist you with your registration?	01 Yes 02 No		
68	Were you made to feel comfortable by all the staff/Dai/attendant at the facility/attending your delivery?	01 Yes 02 No		
69	Who was with you in the delivery room?	01 SAHIYA 02 Family / friend 03 None 04 Both (Sahiya, Family)		
70	What was the gender of the person who did your delivery?	01 Male 02 Female		
71	Would you have been more comfortable if the staff was/were a different gender?	01 Yes 02 No		
Cognitive Support <i>[Both Home and Facility delivery]</i>				
72	Did your birth attendant communicate with you about:			
	i. Progress of your labour	01 Yes 02 No		
	ii. Procedures he/she needed to do	01 Yes 02 No		
	iii. Pain management	01 Yes 02 No		
73	Do you think the entire information was adequate to your needs?	01 Yes 02 No		
74	Were/was the staff/Dai/birth attendant willing to answer your questions?	01 Yes 02 No		
Promptness <i>[Both Home and Facility delivery]</i>				
75	How long did you have to wait before you were attended to by the person who delivered you?	01 More than 1hr 02 30mins to 1hr 03 Less than 30mins		
76	Was there any emergency/complication with the labour and delivery	01 Yes 02 No		
77	Were you Satisfied with the time taken to respond to your emergency?	01 Yes 02 No		
78	Pain Management How was your pain managed?	01 Oral medications 02 Injections 03 Massage 04 Nothing was done 05 Other (specify) _____		
Confidentiality and Privacy <i>[Both Home and Facility delivery]</i>				
79	Were you satisfied with the amount of privacy you were offered?	01 Yes 02 No		
Inter-personal aspect of care <i>[Both Home and Facility delivery]</i>				
80	Did any staff/SAHIYA/Dai/attendant	01 Yes		Could probe



	ever speak to you in a way that upset you? (e.g. shouting, using abusive language etc)	02 No		
81	Did you feel comfortable/free to discuss all your concerns with your attendant?	01 Yes 02 No	If No, ask 82	
82	If NO, What do you think would have made you more comfortable with your attendant?	01 female gender 02 male gender 03 someone I am familiar with 04 someone more friendly 05 other _____		probe
83	Do you think the staff/Dai/birth attendant spent enough time with you during your labour	01 Yes 02 No		
Outcome <i>[Both Home and Facility delivery]</i>				
84	i. How would you rate your health immediately after childbirth? ii. If poor and very poor health of yours, why?	01 Very good 02 Good 03 Average 04 Poor 05 Very poor		
85	i. How would you rate your baby's health immediately after childbirth? ii. If poor and very poor health of your newborn, why?	01 Very good 02 Good 03 Average 04 Poor 05 Very poor		

POSTNATAL CARE (Check 16)				
User: Those received service from health system provider (doctor, nurse, ANM, ASHA)				
Non user : received service from Dai, family members				
#	Question	Coding Categories	Skip to	Answers
Background Information <i>[All participants]</i>				
86	Did anyone check on you and your baby's health within 24 hrs after delivery?	01 Yes 02 No	If No, 89	
87	Where was this first check up done within 24 hour?	01 Facility 02 Home		
88	Who often checked on you during first 24 hour?	01 SAHIYA 02 Dai 03 Health professional (Doctor, Nurse, ANM)		
Emotional Support <i>[Both PNC Users and Non-Users]</i>				
89	Who primarily encouraged you with taking care of yourself and your baby during the postpartum period?	01 Husband 02 Other family member(s) 03 Friend(s)/Neighbour(s) 04 SAHIYA 05 Dai 06 Health professional (Doctor, Nurse, ANM)		
Cognitive Support <i>[PNC Users only]</i>				



90	During your check ups, did the staff/SAHIYA/Birth Attendant ever discuss with you on (who is your primary care provider):			
	i. The feeding of your baby?	01 Yes 02 No		
	ii. Your own nutrition?	01 Yes 02 No		
	iii. Child spacing (family planning)	01 Yes 02 No		
	iv. Your hygiene?	01 Yes 02 No		
	v. Your baby's hygiene? [bathing the baby, cord care]	01 Yes 02 No		
	vi. Immunisation of your baby?	01 Yes 02 No		
91	Do you think the entire information was adequate to your needs?	01 Yes 02 No		
92	Were/was the staff/SAHIYA/Birth Attendant interested and willing to answer your questions?	01 Yes 02 No		
Promptness <i>[Both PNC Users and Non-Users]</i>				
93	Was there any emergency/complication noticed in the postpartum period?	01 Yes 02 No	If No, 95	
94	If yes, Were you happy with the time taken to respond to your emergency?	01 Yes 02 No		
Inter-personal aspect of care <i>[PNC Users Only]</i>				
95	Did any staff/SAHIYA/Birth Attendant ever speak to you in a way that upset you during post partum period?	01 Yes 02 No		
96	Did you feel comfortable/free to discuss all your concerns with your SAHIYA /other staff?	01 Yes 02 No	-98 -97	
97	If no, why or what do you think would have made you more comfortable with your attendant?	01 female gender 02 male gender 03 someone I am familiar with 04 someone more friendly 05 other _____		
98	How many PN visits were made within 6 weeks after delivery? Specify number			
99	Do you think your contact time with the staff/SAHIYA on each visit was:	01 too much 02 too little 03 just enough		
100	Do you think the number of visits was:	01 too much 02 too little 03 just enough		
Outcome <i>[Both PNC Users and Non-Users]</i>				
101	i. How would you rate your health after the PN period? ii. If poor and very poor health of yours, why?	01 Very good 02 Good 03 Average 04 Poor 05 Very poor		
102	i. How would you rate your baby's	01 Very good		



	health after the PN period? ii..If poor and very poor health of your new born, why?	02 Good 03 Average 04 Poor 05 Very poor		
JSY SYSTEM [Both PNC Users and Non-Users]				
103	Are you aware of Rs 1400 given to deliver at health facility?	01 Yes 02 No		
104	When did you become aware of the JSY system?	01 During this pregnancy 02 During previous pregnancy 03 Other _____		
105	From where you become aware of it? Primarily from whom	01 SAHIYA 02 Hospital staff 03 Friend/Neighbour 04 Family member 05 Radio/TV 06 Other _____		
106	Have you received the Rs 1400?	01 Yes 02 No	-107 -109	
107	If yes, how much did you receive?			
108	When did you receive it?	01 On day of delivery 02 Following day after delivery 03 Within one week of delivery 04 Within one month of delivery 05 Later than one month after delivery		
109	If no to 106 , were you told anything about Why you were not given:	01 Yes 02 no		
For women who intended Facility delivery				
110	Will you still be willing to give birth in a facility if there is no Rs 1400?	01 Yes 02 No		
111	Will you still be willing to give birth in a facility if the JSY money is reduced to Rs 700	01 Yes 02 No		
For women who intended to have Home delivery				
112	Will you still be willing to give birth at home if you are promised Rs 1400?	01 Yes 02 No		
113	Will you still be willing to give birth at home if JSY money is increased to Rs 2800(2times)?	01 Yes 02 No		
Experience based on previous place of Delivery (only for multigravida, include live birth, still births, miscarriage)				
114	How do you compare this experience with the last pregnancy before this?	01 This one was much better 02 this one was slightly better 03 they were the same 04 this one was worse 05 this one was much worse		
Decision about place of delivery for next child (if she doesn't intend to have next child, ask what she would recommend to a friend)				
115	Will you like to delivery in health facility again?	01 Yes 02 No	-116 -117	
116	Which of these is the reason you will like to give birth in the facility again? First ask her un-promptly and based on her response note the primary and secondary reason. If she is unable to answer, prompt the response.	01 Good accessibility of the facility 02 Good supplies 03 Good structure 04 Good care (cognitive, emotional support, inter-personal care, skill level)from providers	If yes for Q.115	



		05 reasonable cost 06 perceived health benefits for me and my baby 07 Adequate staff 08 More comfort 09 More privacy 10 Other ____		
	Primary Reason			
	Secondary Reason			
117	Why will you not want to give birth in the facility? First ask her un-promptly and based on her response note the primary and secondary reason. If she is unable to answer, prompt the response.	01 Poor accessibility of the facility 02 poor supplies 03 poor structure 04 poor care (cognitive, emotional support, interpersonal care, skill level)from providers 05 too expensive 06 No perceived health benefits for me and my baby 07 fewer staff 08 too many male staff 09 No comfort 10 No privacy 11 Other _____	If No for Q115	
	Primary Reason			
	Secondary Reason			

Maternal satisfaction with delivery care scale

Q1: Whether or not you were satisfied with the care received (item)

Q 2: Then were asked about their level of satisfaction or dissatisfaction.

Encircle the appropriate response

1. Fully satisfied
2. Somewhat satisfied
3. Neither satisfied nor dissatisfied
4. Somewhat dissatisfied
5. Fully dissatisfied

1.	Antenatal preparation for this delivery by the care provider (e.g. ANM/ Nurse/ doctor/ Dai)	1	2	3	4	5
2.	Waiting time since the care provider (e.g. ANM/ Nurse/ doctor/ Dai) arrival at the place of delivery after beginning of contractions	1	2	3	4	5
3.	Respect and dignity shown by the care provider (e.g. ANM/ Nurse/ doctor/ Dai)	1	2	3	4	5
4.	Support provided by the family during delivery	1	2	3	4	5
5.	Care of the provider (e.g. ANM/ Nurse/ doctor/ Dai) during delivery	1	2	3	4	5
6.	Pain relief during delivery	1	2	3	4	5



7.	Time that the care provider (e.g. ANM/ Nurse/ doctor/ Dai) devote to their patients is	1	2	3	4	5
8.	Health advices given by the care provider (e.g. ANM/ Nurse/ doctor/ Dai) to look after the newborn baby	1	2	3	4	5
9.	Opportunity given to you to clarify doubts about the care of the newborn	1	2	3	4	5
10.	Competency of the care provider (e.g. ANM/ Nurse/ doctor/ Dai) in providing care to both you and your baby	1	2	3	4	5
11.	Health condition of your newborn baby	1	2	3	4	5
12.	Health condition of yourself after delivery	1	2	3	4	5
13.	The care you received during the Antenatal period	1	2	3	4	5
14.	The care you received during the delivery	1	2	3	4	5
15.	The care you received during the Postnatal period	1	2	3	4	5

ii. Tables

a. Demographic and socio-economic profile							
Characteristics		Place of Delivery				Total	
		Institution (N=210)		Home (N=290)		N= 500	
		n	%	n	%	n	%
Age	15 to 18 years	7	3.3	5	1.7	12	2.4
	19 to 24 years	138	65.7	121	41.7	259	51.8
	25 to 29 years	47	22.4	116	40.0	163	32.6
	30 years and above	18	8.6	48	16.6	66	13.2
	Mean and 95% CI	23.01 (22.51-23.52)		25.13 (24.62-25.64)			
Religion	Hindu	146	69.5	250	86.2	396	79.2
	Muslim	53	25.2	29	10.0	82	16.4
	Traditional	11	5.2	11	3.8	22	4.4
Caste	General	28	13.3	74	25.5	102	20.4
	Mean and 95% CI	0.27(0.19-0.36)		0.73(0.64-0.81)			
	Schedule Caste	104	49.5	127	43.8	231	46.2
	Mean and 95% CI	0.45(0.38-0.51)		0.55(0.48-0.61)			
	Schedule Tribe	67	31.9	72	24.8	139	27.8
	Mean and 95% CI	0.48(0.39-0.57)		0.52(0.43-0.60)			
	Other Backward Class	11	5.2	17	5.9	28	5.6
Mean and 95% CI	0.39(0.20-0.58)		0.61(0.41-0.80)				
Education	Illiterate	81	38.6	186	64.1	267	53.4
	Mean and 95% CI	0.30(0.25-0.36)		0.70(0.64-0.75)			
	Read and Write	0	.0	3	1.0	3	.6
	Went to school	129	61.4	101	34.8	230	46.0
	Mean and 95% CI	0.56(0.49-0.62)		0.44(0.37-0.50)			



Mean years of schooling		4.52		2.17			
Monthly family income	Less than 1000	18	8.6	37	12.8	55	11.0
	1000-5000	153	72.9	216	74.5	369	73.8
	5001-10000	31	14.8	31	10.7	62	12.4
	10001-50000	7	3.3	6	2.1	13	2.6
	Above 50000	1	.5	0	.0	1	.2
Type of Family	Nuclear	41	19.5	112	38.6	153	30.6
	Joint	169	80.5	178	61.4	347	69.4
Family Size	3	14	6.7	12	4.1	26	5.2
	4	19	9.0	41	14.1	60	12.0
	5	30	14.3	44	15.2	74	14.8
	6	33	15.7	48	16.6	81	16.2
	7 and above	114	54.3	145	50.0	259	51.8
Mean Family Size		7.23		7.46			
Number of pregnancies	1	98	46.7	61	21.0	159	31.8
	2	63	30.0	97	33.4	160	32.0
	3	17	8.1	65	22.4	82	16.4
	4 and above	32	15.2	67	23.1	99	19.8
	Mean and 95% CI	2.03(1.85-2.22)		2.70(2.52-2.88)			
Number of Living children	1	111	52.9	70	24.1	181	36.2
	2	62	29.5	106	36.6	168	33.6
	3 and above	37	17.6	114	39.3	151	30.2
	Mean and 95% CI	1.81(1.66-1.97)		2.49(2.33-2.65)			
Sex of the newborn	Male	102	48.6	141	48.6	243	48.6
	Female	108	51.4	149	51.4	257	51.4
Received Antenatal care		208	99.0**	264	91.0	472	94.4
Received Postnatal care		210	100.0*	279	96.2	489	97.8

b. Antenatal care

Characteristics		Place of Delivery				Total (N=472)	
		Institution (N=208)		Home (N=264)			
		n	%	n	%	n	%
Who provided Antenatal care	Doctor-Public Health Facility	17	8.2	7	2.7	24	5.1
	Private Doctor	69	33.2	57	21.6	126	26.7
	Nurse	6	2.9	6	2.3	12	2.5
	ANM	116	55.8	194	73.5	310	65.7
First ANC check-up at health facility	within 1-3 months of pregnancy	114	54.8	144	54.5	258	54.7
	within 4-6 months of pregnancy	87	41.8	112	42.4	199	42.2
	within 7-9 months of pregnancy	7	3.4	8	3.0	15	3.2
Number of visits to health facility for ANC	1	11	5.3	13	4.9	24	5.1
	2	57	27.4	90	34.1	147	31.1
	3	64	30.8	105	39.8	169	35.8



	4 and above	76	36.5	56	21.2	132	28.0
	Mean	2.99		2.77			
ANC users who were visited by health provider		181	87.0	217	82.2	398	84.3
Number of ANC visits by health provider	1	7	3.9	15	6.9	22	5.5
	2	34	18.8	46	21.2	80	20.1
	3	56	30.9	82	37.8	138	34.7
	4 and above	84	46.4	74	34.1	158	39.7
	Mean	3.20		2.99			
		Place of Delivery				Total (N=472)	
		Institution (N=208)		Home (N=264)			
		n	%	n	%	n	%
Type/level of facility for ANC	Anganwadi Center	121	58.2	193	73.1	314	66.5
	Sub Center	3	1.4	2	.8	5	1.1
	Primary Health Center	7	3.4	3	1.1	10	2.1
	Community Health Center	2	1.0	2	.8	4	.8
	District Hospital	5	2.4	5	1.9	10	2.1
	Private Hospital	70	33.7	59	22.3	129	27.3
Reaching health facility for ANC	Walking	138	66.3	224	84.8	362	76.7
	Vehicle Paid	69	33.2	40	15.2	109	23.1
	Vehicle Free	1	.5	0	.0	1	.2
Time taken to reach health facility for ANC	More than 2 hours	13	6.3	2	.8	15	3.2
	1-2 hours	16	7.7	11	4.2	27	5.7
	30 mins - 1 hour	34	16.3	32	12.1	66	14.0
	Less than 30 mins	145	69.7	219	83.0	364	77.1
Cleanliness of health facility -- ANC		201	96.6	254	96.2	455	96.4
Who usually attended for ANC at health facility	ANM	117	56.3	193	73.1	310	65.7
	Doctor	68	32.7	51	19.3	119	25.2
	Nurse	14	6.7	11	4.2	25	5.3
	Anganwadi worker	8	3.8	9	3.4	17	3.6
	Others	1	.5	0	.0	1	.2
Mean expenditure during ANC period (INR)	Transport	353.86		138.82			
	Drugs and Injection	1272.79		900.89			
	Diagnostics	437.13		129.86			
	Health provider fees	293.78		113.13			
	Others	199.87		202.99			
	Total expenditure	1005.60		402.65			
Who usually accompanied for ANC at health facility	Husband	76	36.5	60	22.7	136	28.8
	Other family members	48	23.1	32	12.1	80	16.9
	Friends / Neighbour	0	.0	7	2.7	7	1.5
	Sahiya	28	13.5	47	17.8	75	15.9
	Alone	56	26.9	118	44.7	174	36.9
Made to feel comfortable by staff at the facility during ANC		204	98.1*	249	94.3	453	96.0
Gender of the staff who	Male	46	22.1	43	16.3	89	18.9



usually attended during ANC visit at health facility	Female	162	77.9	221	83.7	383	81.1
Health professional (doctor, nurse or midwife) or SAHIYA discussed on regular ANC checkup		179	86.1	218	82.6	397	84.1
Health professional (doctor, nurse or midwife) or SAHIYA discussed on identifying a skilled provider and making arrangements for delivery of your child		182	87.5	220	83.3	402	85.2
Health professional (doctor, nurse or midwife) or SAHIYA discussed on making a plan/arrangements for transportation to a facility during labour		158	76.0*	164	62.1	322	68.2
Health professional (doctor, nurse or midwife) or SAHIYA discussed on recognizing danger signs of serious health problems during pregnancy, childbirth or soon after		138	66.3*	145	54.9	283	60.0
Health professional (doctor, nurse or midwife) or SAHIYA discussed on where to go and what community resources such as emergency transport, funds, communications are available in case of emergencies		156	75.0	178	67.4	334	70.8
Health professional (doctor, nurse or midwife) or SAHIYA discussed on identifying and making arrangements for a blood donor		54	26.0*	44	16.7	98	20.8
Health professional (doctor, nurse or midwife) or SAHIYA discussed on benefit of JSY and associated monetary benefit		186	89.4	221	83.7	407	86.2
Entire information was adequate		174	83.7*	194	73.5	368	78.0
Health professional (doctor, nurse or midwife) or SAHIYA seem willing to answer any questions		189	90.9	228	86.4	417	88.3
Waiting time before seeing provider during ANC	0-15 mins	92	44.2	153	58.0	245	51.9
	15-30 mins	52	25.0	52	19.7	104	22.0
	30 mins - 1 hour	45	21.6	40	15.2	85	18.0
	Above 1 hour	19	9.1	19	7.2	38	8.1
Waiting time satisfactory		190	91.3	243	92.0	433	91.7
Satisfied with privacy during ANC		186	89.4	224	84.8	410	86.9
Bad behaviour of staff during ANC		32	15.4	45	17.0	77	16.3
Felt comfortable/free to discuss all concerns with provider during ANC		193	92.8	244	92.4	437	92.6
		Place of Delivery				Total (N=35)	
		Institution (N=15)		Home (N=20)			
		n	%	n	%	n	%
What promotes comfortable communication with provider during ANC	Female gender	2	13.3	2	10.0	4	11.4
	Someone familiar	10	66.7	10	50.0	20	57.1
	Someone more friendly	2	13.3	7	35.0	9	25.7
	Others	1	6.7	1	5.0	2	5.7
		Place of Delivery				Total (N=472)	
		Institution (N=208)		Home (N=264)			
		n	%	n	%	n	%
SAHIYA encouraged to attend monthly clinics, (VHND, ANC)		140	67.3	164	62.1	304	64.4
SAHIYA helped in accessing services (transport, getting drugs and injections etc) during ANC		169	81.3	205	77.7	374	79.2



SAHIYA discussed about Nutrition		182	87.5	214	81.1	396	83.9
SAHIYA discussed about Rest		182	87.5	215	81.4	397	84.1
SAHIYA discussed about Malaria prevention		138	66.3	154	58.3	292	61.9
SAHIYA discussed about Familiarizing with health facility		172	82.7*	195	73.9	367	77.8
Felt adequately prepared for delivery after entire ANC		194	93.3*	232	87.9	426	90.3
		Place of Delivery				Total (N=500)	
		Institution (N=210)		Home (N=290)			
		n	%	n	%	n	%
Health status after ANC	Very good	28	13.3	33	11.4	61	12.2
	Good	100	47.6	159	54.8	259	51.8
	Average	34	16.2	47	16.2	81	16.2
	Poor	39	18.6	40	13.8	79	15.8
	Very poor	9	4.3	11	3.8	20	4.0
		Place of Delivery				Total (N=472)	
		Institution (N=208)		Home (N=264)			
		n	%	n	%	n	%
Primary reason for decision to attend ANC	Perceived benefits of ANC on pregnancy outcome from personal experience	104	50.0	111	42.0	215	45.6
	Perceived benefits of ANC on pregnancy outcome from experience of other women	19	9.1	32	12.1	51	10.8
	Husband/family decision	22	10.6	36	13.6	58	12.3
	Based on information by SAHIYA	25	12.0	46	17.4	71	15.0
	Assurance from community health worker/SAHIYA about good care at facility	3	1.4	6	2.3	9	1.9
	Awareness of cash benefit for registration for ANC/MJSSA-JSY scheme	6	2.9	10	3.8	16	3.4
	Because of a health condition	28	13.5	22	8.3	50	10.6
	Other	1	.5	1	.4	2	.4
Secondary reason for decision to attend ANC	Perceived benefits of ANC on pregnancy outcome from personal experience	35	16.8	42	15.9	77	16.3
	Perceived benefits of ANC on pregnancy outcome from experience of other women	2	1.0	39	14.8	41	8.7
	Husband/family decision	65	31.3	66	25.0	131	27.8
	Based on information by SAHIYA	46	22.1	59	22.3	105	22.2
	Assurance from community health worker/SAHIYA about good care at facility	15	7.2	6	2.3	21	4.4
	Awareness of cash benefit for registration for ANC/MJSSA-JSY scheme	18	8.7	34	12.9	52	11.0



	Because of a health condition	21	10.1	16	6.1	37	7.8
	Other	6	2.9	2	.8	8	1.7
		Place of Delivery				Total (N=28)	
		Institution (N=2)		Home (N=26)			
		n	%	n	%	n	%
Primary reason for decision to not attend ANC	No knowledge of health benefit of ANC	1	50.0	6	23.1	7	25.0
	Place was too far and no transport	0	.0	1	3.8	1	3.6
	No one to accompany me	0	.0	3	11.5	3	10.7
	No one to look after other children at home	1	50.0	10	38.5	11	39.3
	Too expensive to attend	0	.0	2	7.7	2	7.1
	Fear of abusive behaviour / scolding by provider	0	.0	2	7.7	2	7.1
	No privacy	0	.0	1	3.8	1	3.6
	Other	0	.0	1	3.8	1	3.6
Secondary reason for decision to not attend ANC	No knowledge of health benefit of ANC	1	50.0	11	42.3	12	42.9
	Place was too far and no transport	1	50.0	2	7.7	3	10.7
	No one to accompany me	0	.0	2	7.7	2	7.1
	No one to look after other children at home	0	.0	2	7.7	2	7.1
	Too expensive to attend	0	.0	3	11.5	3	10.7
	Presence of male staff at facility	0	.0	1	3.8	1	3.6
	Fear of abusive behaviour / scolding by provider	0	.0	2	7.7	2	7.1
	No privacy	0	.0	2	7.7	2	7.1
	Other	0	.0	1	3.8	1	3.6

c. Intentional versus actual place of delivery

		Actual place of delivery				Total (N=500)	
		Institution (N=210)		Home (N=290)			
		n	%	n	%	n	%
Intentional place of delivery	Institution	158	75.2	67	23.1	225	45.0
	Home	52	24.8	223	76.9	275	55.0

d. Reasons for choice of place of delivery

Characteristics		Primary reason		Secondary reason	
		n	%	n	%
Reason for preferring institutional delivery	Perception of better pregnancy outcome with institutional delivery	125	55.6	30	13.3



(N=255)	Quick referral in case of emergency	14	6.2	13	5.8
	Presence of doctors and nurses at the facilities	16	7.1	35	15.6
	Adequate resources (medicine)	4	1.8	8	3.6
	Husband/family decision	10	4.4	40	17.8
	Assurance from community health worker/SAHIYA about good care at facility	23	10.2	29	12.9
	Awareness of cash benefit institutional delivery [MJSSA-JSY scheme]	17	7.6	51	22.7
	Centre near home	1	.4	2	.9
	Lack of space at home	2	.9	7	3.1
	Because of a health condition	13	5.8	9	4.0
	Others	0	.0	1	.4



Reason for unintentionally delivering at home (N=67)	Unexpected delivery so there was no time	48	71.6	13	19.4	
	There was no available transport	8	11.9	27	40.3	
	Absence of male /family members who could have helped arrange for transport	10	14.9	21	31.3	
	Was too weak and could not go to facility to deliver	1	1.5	6	9.0	
Reason for preferring home delivery (N=275)	No perceived health benefit of institutional delivery over home delivery	17	6.2	6	2.2	
	Dai lives close enough to my home	45	16.4	30	10.9	
	Husband/family decision	26	9.5	32	11.6	
	Too expensive to access	45	16.4	23	8.4	
	Presence of male staff at facility	5	1.8	8	2.9	
	Fear of abusive behaviour / scolding by provider	29	10.5	9	3.3	
	Fear of clinical interventions like injections and instrumentation	23	8.4	12	4.4	
	Unsure about availability of transport at night	23	8.4	16	5.8	
	Better comfort and privacy with home delivery	37	13.5	71	25.8	
	No one to look after other children at home	24	8.7	66	24.0	
	Other	1	.4	2	.7	
	Reason for unintentionally delivering at institution (N=52)	Dai was unavailable	10	19.2	4	7.7
		Developed a complication	37	71.2	3	5.8
Husband/family decision		4	7.7	19	36.5	
Assurance from community health worker/SAHIYA about good care at facility		1	1.9	16	30.8	
Lack of space at home		0	.0	9	17.3	
Other		0	.0	1	1.9	

		Place of Delivery				Total (N=500)	
		Institution (N=210)		Home (N=290)		n %	
		n	%	n	%		
Who primarily conducted delivery	Doctor	19	9.0	1	.3	20	4.0
	Nurse	187	89.0	12	4.1	199	39.8
	ANM	4	1.9	1	.3	5	1.0
	Dai	0	.0	241	83.1	241	48.2
	Family Member	0	.0	34	11.7	34	6.8
	Friend / Neighbour	0	.0	1	.3	1	.2



e. Intrapartumcare

Characteristics		Institution Deliveries (N=210)	
		n	%
Type/level of facility for delivery	Sub Center	16	7.6
	Primary Health Center	49	23.3
	Community Health Center	145	69.0
Reaching health facility for delivery	Walking	3	1.4
	Vehicle Paid	118	56.2
	Vehicle Free	89	42.4
Time taken to reach health facility for delivery	More than 2 hours	17	8.1
	1-2 hours	40	19.0
	30 mins - 1 hour	79	37.6
	Less than 30 mins	74	35.2
Health facility easily accessible at night (or in emergency)		183	87.1
Structure appeared well maintained		203	96.7
Toilets clean for patient use		165	78.6
Clean delivery table in the labour/delivery room		199	94.8
Presence of Doctor on arrival at facility for delivery		153	72.9
Presence of Nurse/ANM on arrival at facility for delivery		207	98.6
Accompanied to health facility for delivery -- Sahiya		99	47.1
Accompanied to health facility for delivery -- Family members		209	99.5
Accompanied to health facility for delivery -- Husband		22	10.5
Sahiya assisted in registration		97	46.2
Made to feel comfortable by all the staff/Dai/attendant at the facility		195	92.9
Presence in the delivery room -- Sahiya		56	26.7
Presence in the delivery room -- Family members		28	13.3
Presence in the delivery room -- None		61	29.0
Presence in the delivery room -- Sahiya and family members		2	1.0
Gender of the person who delivered	Male	15	7.1
	Female	195	92.9
Preference of an alternate gender for conducting delivery		32	15.2

Characteristics	Place of Delivery				Total (N=500)	
	Institution (N=210)		Home (N=290)			
	n	%	n	%	n	%
Expenditure on transport for delivery	412.29		--			
Expenditure on drugs and injection for delivery	943.99		479.77			
Expenditure on tests for delivery	198.88		28.03			
Expenditure on health worker for delivery	142.36		130.95			



Expenditure on others for delivery		259.28		342.49			
Birth attendant communicated about progression of labour		194	92.4	268	92.4	462	92.4
Birth attendant communicated about procedures he/she needed to do		198	94.3	270	93.1	468	93.6
Birth attendant communicated about pain management		186	88.6	268	92.4	454	90.8
Entire information was adequate		192	91.4	268	92.4	460	92.0
Staff/Dai/birth attendant willing to answer questions		193	91.9	265	91.4	458	91.6
Waiting time before attended for delivery	More than 1 hour	19	9.0	28	9.7	47	9.4
	30 mins to 1 hour	17	8.1	34	11.7	51	10.2
	Less than 30 mins	174	82.9	228	78.6	402	80.4
Emergency/complication during labour and delivery		45	21.4**	28	9.7	73	14.6
Satisfaction with response to emergency		42	93.3	26	92.9	68	93.2
Pain management -- oral medication		9	4.3	3	1.0	12	2.4
Pain management -- injection		115	54.8	71	24.5	186	37.2
Pain management -- massage		40	19.0	169	58.3	209	41.8
Pain management -- nothing		45	21.4	47	16.2	92	18.4
Pain management -- others		3	1.4	1	0.3	4	0.8
Privacy during delivery		208	99.0	283	97.6	491	98.2
Bad behavior of staff during delivery		26	12.4	21	7.2	47	9.4
Felt comfortable/free to discuss all concerns with provider		189	90.0	260	89.7	449	89.8
What promotes comfortable communication with provider during delivery	Female gender	0	0.0	2	6.7	2	3.9
	Someone familiar	14	66.7	14	46.7	28	54.9
	Someone more friendly	6	28.6	14	46.7	20	39.2
	Others	1	4.8	0	0.0	1	2.0
Staff/Dai/birth attendant spent enough time during labour		198	94.3	270	93.1	468	93.6
Mother's health status post delivery	Very good	31	14.8	38	13.1	69	13.8
	Good	106	50.5	157	54.1	263	52.6
	Average	30	14.3	55	19.0	85	17.0
	Poor	33	15.7	31	10.7	64	12.8
	Very poor	10	4.8	9	3.1	19	3.8
Newborn's health status post delivery	Very good	91	43.3	105	36.2	196	39.2
	Good	95	45.2	146	50.3	241	48.2
	Average	10	4.8	18	6.2	28	5.6
	Poor	10	4.8	19	6.6	29	5.8
	Very poor	4	1.9	2	0.7	6	1.2



f. Postpartum care

		Place of Delivery				Total (N=500)		
		Institution (N=210)		Home (N=290)		n		
		n	%	n	%			
Check on mother's and newborn's health within 24 hrs after delivery		196	93.3**	222	76.6	418	83.6	
		Place of Delivery				Total (N=418)		
		Institution (N=196)		Home (N=222)		n		
		n	%	n	%			
Place of first checkup within 24 hours post delivery		Institution	184	93.9	14	6.3	198	47.4
		Home	12	6.1	208	93.7	220	52.6
Health provider who checked within 24 hours post delivery		Sahiya	19	9.7	8	3.6	27	6.5
		Dai	10	5.1	113	50.9	123	29.4
		Health professional (Doctor, Nurse, ANM)	167	85.2	101	45.5	268	64.1
		Place of Delivery				Total (N=500)		
		Institution (N=210)		Home (N=290)		n		
		n	%	n	%			
Primary encouragement to take care of mother and newborn during PNC period		Husband	24	11.4	40	13.8	64	12.8
		Other family member(s)	145	69.0	186	64.1	331	66.2
		Friend(s) / Neighbour(s)	1	.5	1	.3	2	.4
		Sahiya	26	12.4	9	3.1	35	7.0
		Dai	6	2.9	54	18.6	60	12.0
		Health professional (Doctor, Nurse, ANM)	8	3.8	0	.0	8	1.6
Staff/Sahiya/birth attendant discuss on breastfeeding		203	96.7	262	93.9	465	95.1	
Staff/Sahiya/birth attendant discuss on mother's nutrition		190	90.5	256	91.8	446	91.2	
Staff/Sahiya/birth attendant discuss on family planning		126	60.0	135	48.4	261	53.4	
Staff/Sahiya/birth attendant discuss on mother's cleanliness and hygiene		189	90.0	248	88.9	437	89.4	
Staff/Sahiya/birth attendant discuss on newborn's cleanliness and hygiene		189	90.0	236	84.6	425	86.9	
Staff/Sahiya/birth attendant discuss on immunization		197	93.8	242	86.7	439	89.8	
Entire PNC information adequate		193	91.9	249	89.2	442	90.4	
Staff/Sahiya/birth attendant interested and willing to answer questions on PNC		195	92.9	258	92.5	453	92.6	
Emergency/complication noticed in the postpartum period		46	21.9	39	13.4	85	17.0	
Satisfaction with time taken to respond to emergency		36	81.8	30	81.1	66	81.5	
Bad behavior of staff during PNC		32	15.2	36	12.4	68	13.6	



Felt comfortable/free to discuss all concerns with provider during PNC		190	90.5	274	94.5	464	92.8
What promotes comfortable communication with provider during PNC	Female gender	6	30.0	1	6.3	7	19.4
	Someone familiar	12	60.0	9	56.3	21	58.3
	Someone more friendly	1	5.0	5	31.3	6	16.7
	Others	1	5.0	1	6.3	2	5.6
Number of PNC visits	1	28	17.3	32	16.9	60	17.1
	2	34	21.0	33	17.5	67	19.1
	3	41	25.3	57	30.2	98	27.9
	4	22	13.6	21	11.1	43	12.3
	>=5	37	22.8	46	24.3	83	23.6
Contact time with the staff/SAHIYA on each visit	Too much	46	21.9	60	20.7	106	21.2
	Too little	59	28.1	130	44.8	189	37.8
	Just enough	105	50.0	100	34.5	205	41.0
Frequency of visits	Too much	43	20.5	58	20.0	101	20.2
	Too little	62	29.5	139	47.9	201	40.2
	Just enough	105	50.0	93	32.1	198	39.6
Mother's health status post delivery	Very good	37	17.6	43	14.8	80	16.0
	Good	104	49.5	153	52.8	257	51.4
	Average	38	18.1	59	20.3	97	19.4
	Poor	23	11.0	28	9.7	51	10.2
	Very poor	8	3.8	7	2.4	15	3.0
Newborn's health status post delivery	Very good	97	46.2	107	36.9	204	40.8
	Good	89	42.4	144	49.7	233	46.6
	Average	14	6.7	20	6.9	34	6.8
	Poor	7	3.3	18	6.2	25	5.0
	Very poor	3	1.4	1	.3	4	.8
g. JSY							
Awareness regarding receipt of INR 1400 if delivered at institution		199	94.8**	244	84.1	443	88.6
		Place of Delivery				Total (N=443)	
		Institution (N=199)		Home (N=244)			
		n	%	n	%	n	%
When was JSY related information received	During this pregnancy	145	72.9	139	57.0	284	64.1
	During previous pregnancy	52	26.1	104	42.6	156	35.2
	Other	2	1.0	1	.4	3	.7
Source of JSY related information	Sahiya	158	79.4	170	69.7	328	74.0
	Hospital staff	5	2.5	10	4.1	15	3.4
	Friend / Neighbour	32	16.1	46	18.9	78	17.6
	Family member	4	2.0	18	7.4	22	5.0



Received JSY benefit		97	46.2	9	3.1	106	21.2
		Place of Delivery				Total (N=106)	
		Institution (N=97)		Home (N=9)			
		n	%	n	%	n	%
Amount received	500	2	2.1	1	11.1	3	2.8
	600	1	1.0	0	.0	1	.9
	1400	81	83.5	8	88.9	89	84.0
	1500	1	1.0	0	.0	1	.9
	1600	4	4.1	0	.0	4	3.8
	1650	8	8.2	0	.0	8	7.5
When was the JSY benefit received	On day of delivery	9	9.3	2	22.2	11	10.4
	Following day after delivery	8	8.2	2	22.2	10	9.4
	Within one week of delivery	24	24.7	3	33.3	27	25.5
	Within one month of delivery	29	29.9	1	11.1	30	28.3
	Later than one month after delivery	27	27.8	1	11.1	28	26.4
		Place of Delivery				Total (N=394)	
		Institution (N=113)		Home (N=281)			
		n	%	n	%	n	%
Awareness regarding non receipt of JSY benefit		38	33.6%	112	39.9%	150	38.1%
		Place of Delivery				Total (N=225)	
		Institution (N=158)		Home (N=67)			
		n	%	n	%	n	%
Willingness to deliver at institution without INR 1400 benefit		147	93.0	59	88.1	206	91.6
Willingness to deliver at institution with INR 700 benefit		143	90.5	59	88.1	202	89.8
		Place of Delivery				Total (N=275)	
		Institution (N=52)		Home (N=223)			
		n	%	n	%	n	%
Willingness to deliver at home if benefit of INR 1400 was assured		25	48.1	110	49.3	135	49.1
Willingness to deliver at home if benefit of INR 2800 was assured		30	57.7	137	61.4	167	60.7
		Place of Delivery				Total (N=319)	
		Institution (N=99)		Home (N=220)			
		n	%	n	%	n	%
Comparison between present and previous pregnancy	This one was much better	24	24.2	34	15.5	58	18.2
	This one was slightly better	43	43.4	106	48.2	149	46.7
	They were the same	22	22.2	59	26.8	81	25.4
	This one was worse	10	10.1	20	9.1	30	9.4
	This one was much worse	0	.0	1	.5	1	.3



h. Future place of delivery

		Place of Delivery				Total (N=500)	
		Institution (N=210)		Home (N=290)			
		n	%	n	%	n	%
Willingness to deliver at institution in the future		189	90.0	183	63.1	372	74.4
		Place of Delivery				Total (N=372)	
		Institution (N=189)		Home (N=183)			
		n	%	n	%	n	%
Primary reason for willingness to deliver at facility	Good accessibility of the facility	8	4.2	6	3.3	14	3.8
	Good supplies	73	38.6	74	40.4	147	39.5
	Good structure	3	1.6	1	.5	4	1.1
	Good care (cognitive, emotional support, inter-personal care, skill level)from providers	30	15.9	28	15.3	58	15.6
	Reasonable cost	23	12.2	38	20.8	61	16.4
	Perceived health benefits for me and my baby	47	24.9	27	14.8	74	19.9
	Adequate staff	3	1.6	5	2.7	8	2.2
	More comfort	2	1.1	2	1.1	4	1.1
	Others	0	.0	2	1.1	2	.5
Secondary reason for willingness to deliver at facility	Good accessibility of the facility	7	3.8	4	2.2	11	3.0
	Good supplies	21	11.4	25	14.0	46	12.7
	Good structure	1	.5	4	2.2	5	1.4
	Good care (cognitive, emotional support, inter-personal care, skill level)from providers	46	25.0	25	14.0	71	19.6
	Reasonable cost	32	17.4	44	24.7	76	21.0
	Perceived health benefits for me and my baby	59	32.1	61	34.3	120	33.1
	Adequate staff	6	3.3	8	4.5	14	3.9
	More comfort	12	6.5	6	3.4	18	5.0
	More privacy	0	.0	1	.6	1	.3
		Place of Delivery				Total (N=128)	
		Institution (N=21)		Home (N=107)			
		n	%	n	%	n	%
Primary reason for not willing to deliver at facility	Poor accessibility of the facility	3	14.3	26	24.3	29	22.7
	Poor supplies	6	28.6	16	15.0	22	17.2
	Poor structure	3	14.3	8	7.5	11	8.6
	Poor care (cognitive, emotional support, inter-personal care, skill level)from providers	3	14.3	15	14.0	18	14.1
	Too expensive	5	23.8	16	15.0	21	16.4
	No perceived health benefits for me	1	4.8	11	10.3	12	9.4



	and my baby						
	Fewer staff	0	.0	1	.9	1	.8
	Too many male staff	0	.0	12	11.2	12	9.4
	No privacy	0	.0	2	1.9	2	1.6
Secondary reason for not willing to deliver at facility	Poor accessibility of the facility	1	5.6	3	2.9	4	3.3
	Poor supplies	2	11.1	16	15.7	18	15.0
	Poor structure	0	.0	5	4.9	5	4.2
	Poor care (cognitive, emotional support, inter-personal care, skill level)from providers	5	27.8	21	20.6	26	21.7
	Too expensive	0	.0	14	13.7	14	11.7
	No perceived health benefits for me and my baby	4	22.2	16	15.7	20	16.7
	Fewer staff	1	5.6	3	2.9	4	3.3
	Too many male staff	4	22.2	18	17.6	22	18.3
	No comfort	1	5.6	4	3.9	5	4.2
	No privacy	0	.0	2	2.0	2	1.7

*p<.05, **p<.001



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