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An Exploration of Decision-Making Processes on Infant Delivery Site from the Perspective of Pregnant Women, New Mothers, and Their Families in Northern Karnataka, India

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Abstract This study was conducted to explore the decision-making processes regarding sites for delivery of infants among women, their husbands, and mothers-in-law in a rural area of northern Karnataka state, south India. Qualitative semi-structured, individual in-depth interviews were conducted in 2010 among 110 pregnant women, new mothers, husbands and mothers-in-law. Interviews were conducted by trained local researchers in participants' languages and then translated into English. Decisions were made relationally, as family members weighed their collective attitudes and experiences towards a home, private or public delivery. Patterns of both concordance and discordance between women and their families' preferences for delivery site were present. The voice of pregnant women and new mothers was not always subordinate to that of other family members. Still, the involvement of husbands and mothers-in-law was important in decision-making, indicating the need to consider the influence of household gender and power dynamics. All respondent types also expressed shifts in social context and cultural attitudes towards increasing preference for hospital delivery. An appreciation of the interdependence of family members' roles in delivery site decision-making, and how they are influenced by the socio-cultural context, must be considered in frameworks used to guide the development of relevant interventions to improve the utilization and quality of maternal, neonatal and child health services.

Keywords Reproductive health · Maternal and child health · Infant delivery sites · Rural India · Qualitative research

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Introduction

Pregnancy, childbirth and early childhood remain major contributors to morbidity and mortality worldwide, with the highest incidence of adverse outcomes in South Asia and sub-Saharan Africa. Despite improvements, India continues to be faced with poor maternal, neonatal and child health (MNCH) outcomes in many regions [1]. Among the main reasons for poor outcomes is lack of access to and utilization of health care services, especially emergency obstetrics and newborn care services [2, 3]. The Government of India has aimed to improve MNCH outcomes through its National Rural Health Mission (NRHM), focussing on improving access to effective primary health

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care, including increased uptake of skilled attendants and institutional deliveries in rural communities where outcomes are poorest [4].

Previous research on the factors influencing choice of birthing site has focused on variables like healthcare access, women's autonomy, knowledge, or socio-demographic variables [3, 5–11]. However there has only recently been an effort to understand the household dynamics and specifically men's or husband's influences on a given delivery site decision [7, 11–18]. There has been increasing recognition that women's autonomy or decision-making power may be an important yet insufficient target for interventions to improve MNCH behaviours and outcomes without addressing the role of family members such as husbands and mothers-in-law [15, 19]. Yet few studies have qualitatively explored the perspectives of couples and their parents on how decisions are made on pregnancy and childbirth as a means to inform interventions involving families [15, 20]. Researchers are recognizing the suitability of anthropological methodology and qualitative approaches for gaining a deeper understanding on the complex array of factors and family dynamics that may be involved in the process of decision-making on service utilization including birth delivery site in a given cultural context [12, 13, 15, 17, 18, 21].

The Karnataka Health Promotion Trust (KHPT) has worked to support the NRHM since 2008 to improve MNCH outcomes across northern Karnataka state, south India. The main objectives of KHPT's programs have been to improve availability, accessibility, quality, utilization and coverage of MNCH services for rural communities. A qualitative study was undertaken by KHPT in partnership with the University of Manitoba to gain insight into socio-cultural attitudes and practices around pregnancy, delivery and care of the neonate. The aim of this paper is to explore the variation in family dynamics in relation to decision-making on pregnancy delivery site in northern Karnataka, India. This will provide the basis for a discussion of important elements to be considered in MNCH decision-making frameworks that may inform effective health programs.

Methods

The study included 110 semi-structured, individual in-depth interviews conducted between July and October 2010 with pregnant women, new mothers, husbands and mothers-in-law in three districts of northern Karnataka: Bagalkot, Gulbarga and Bellary. Interview guides were developed in partnership with KHPT to include open-ended questions on pre- and post-natal care practices, uptake of MNCH services and delivery site preferences. The interview guide was refined through pilot-testing in the local language of Kannada with trained local researchers and translators. Selection of participants was guided by the principle of "maximizing variation". Purposeful stratified sampling was employed, in which participants were stratified by district, sub-centre, and religion or ethnicity (i.e., Muslim, lower and upper caste Hindu, including scheduled tribes). Inclusion criteria were: pregnant women; women who had a live birth within the past 3 months in public or private hospitals, or at home (this time frame was chosen as it was not too close to time of birth to be intrusive yet recent enough for participants to recall birthing issues); husbands; and mothers-in-law. Exclusion criteria were individuals not able to provide informed consent, and women who did not normally access services in the area.

Interviews were conducted in participants' dialects by trained local researchers and then transcribed and translated to English. Thematic analysis was undertaken manually by the first two authors, starting with a line-by-line review of all transcripts and coding in line with the topics in the interview guide, which provided a general framework while allowing new codes to be created where necessary. The codes were finalized with the co-authors. This paper draws specifically on the codes around reasons for delivery site choices and decision-making dynamics. As women are the central subject in the process of child delivery, the patterns of decision-making were analyzed using the reference point of the pregnant woman or new mother. Pregnant or new mother's preferences for delivery site were compared with those of husbands and mothers-in-law, and in relation to actual delivery site. The delivery site choices that were described within a family unit appeared to follow three main patterns: first, concordance in which women agreed with their family on preferred and actual delivery site; second, discordant views in which women had different preferences than family members but delivered at the family's preferred site; and third, discordant views when women disagreed with the family yet delivered at the woman's preferred site. These relational patterns of decision-making were compared by socio-demographic characteristics and factors affecting decision-making, and considered in light of broader literature on frameworks for health decision-making and recommendations for MNCH interventions. Ethical approval for the study was granted from the University of Manitoba Human Research Ethics Board and from St. John's Medical College in Bangalore.

Results

Families following the first pattern of concordant views on delivery site based their decisions on many issues. These respondents discussed the importance of the in-laws' or

other elders' views on their decision-making, in part because these respondents were frequently part of joint families. One husband in Bellary explained that his family decides together, and that the elders have final say:

> At my home we all together take decision, but my father's and mother's decision will be final.

A number of husbands also said they considered their wife's preferences, even without considering the preference of the in-laws. One husband in Gulbarga stated how he and his wife decided together on delivery site:

> Regarding decisions as we are husband and wife, it is always better to have a collective decision and to sort out things whatever may be the problem. We will discuss and decide, come to a final conclusion and that will be the decision.

There was variability in delivery site preference among families with concordant views. Many families agreed upon home-based delivery due to fear of or actual bad experiences at a hospital. This was more common among those who were below the poverty line. Often family members' concordant preferences could be based on different factors but aligned for the final decision. Young women often felt that having a normal delivery, with amenities like hot water and comfort, is desirable and only possible at home. Others based their preference for home on a previous bad experience, such as this woman in Bellary who said:

> I feel better at home [as] if it is hospital the doctors may create painful situation… They press the stomach, it produces pain. They give injection and I.V.; it will make me feel so much pain. So I feel better in home.

For mothers-in-law, one of the main concerns about hospitals was that interventions such as injections and C-sections were dangerous. Another view widely expressed by mothers-in-law was that pregnant women today are more sensitive:

> Look, we weren't aware of the hospital deliveries and all. I wonder how we delivered one after the other; we used to go out for work after 3 months… We used to work hard in fields. But now, these women do not have such kind of hard jobs and what they do are simple works. We were working in the field and at home… Now, people are very sensitive and delicate, and moreover, they have necessary facilities [health care available nearby].

This attitude led some mothers-in-law to maintain a preference for home delivery. Those husbands and young women who preferred home delivery often based this on an attitude that when the pregnancy was uncomplicated, hospitals were unnecessary, as this husband conveyed that,

> As we didn't have any problem, during pregnancy, we got our delivery done at home only, we never felt like going to the hospital. But the delivery has taken place very well at home… (Husband, Bellary).

Irrespective of socio-economic group or respondent type, many also wanted home deliveries to avoid the expense of hospital delivery or were forced to stay home because of a lack of ambulance. One husband who is above poverty in Bellary expressed this by saying that all three of his wife's deliveries happened at home to avoid hospital costs:

> If it takes place at home, it is very good. Hospital means we will be having more expenses, if you go for hospital now you have to spend 10,000/- Rupees…Where ever you go, you have to spend so much, there is no difference between any doctor…

There were also many participants, of all socio-economic groups, who shared a concordant family decision on hospital as the delivery site. Sometimes this was due to good experiences with a quick delivery, as one new mother in Bellary expressed:

> We wanted to go to hospital… They give an injection; the baby has been delivered easily.

This new mother in Bellary also described the family consensus on delivering at the hospital rather than home due to her family's trust in good medical treatment by hospital staff:

> We didn't want to do it at home. There was no one at home; I went to hospital for the third delivery as we believed that they would look after [us] well.

Similarly, mothers-in-law stated how they felt their daughter-in-law's treatment and delivery speed was fast at the hospital, and some husbands also mentioned that they and their parents decided on the government hospital. For example a husband in Bellary expressed that they brought his wife to the hospital because it was troublesome to deliver at home:

> As my wife couldn't bear the labour pain, so we had taken her there [to government hospital]; no sooner they gave an injection, the delivery took place.

Government hospitals were also reported as being more affordable than private institutions, and therefore seen as "for the poor", which was expressed by a pregnant woman in Bellary:

> I have decided to go here only for delivery…because, we don't have that much… for poor people…

> government. For rich people… they go to private hospital. How is it possible for us to go?

In some cases, respondents said that the community health workers or hospital staff that met the pregnant woman or family for an antenatal checkup influenced decisions, as a husband in Gulbarga who is above poverty stated:

> No one used to say to go anywhere else for these things (delivery), every one used to have delivery done at home only; it used to be quite normal… But nowadays these people [community health workers] make us to go there compulsorily by saying this will happen and that will happen… So we should get it done there only, I also accepted their suggestion and [we] got it done there only (Government hospital).

Only a couple of women said they agreed with her family's preference for her to deliver at the private institution, as this woman who is below poverty shared:

> In our families, our elders ask us to go to the private hospitals. They tell us not to go to the government hospitals since they don't give proper treatment and care. In private ones, they do proper check-up and provide good treatment. (New mother, Gulbarga)

The contribution of husbands and mothers-in-law in decisions for private hospital delivery, more often than young mothers, were based on the perception of higher quality there. For example, one husband who is above the poverty line in Bellary shared his comparison of the delivery sites:

> Now, if you go to private hospital, they will make you to cough more money; by doing so they will be taking care of you in a good manner. If you go to Government hospital, there it is like, just wait, just wait; by saying so, they will make someone to die. (Husband, Bellary)

A second relational pattern in decision-making was discordance between women and their families, with delivery site being selected by the family. The majority of below-poverty women who were discordant with their families preferred a home birth but were taken to a hospital. The factors influencing their preference for home were similar to those cited above. However, their families believed that hospitals, and particularly private ones, were safer than home.

> For me I wanted it to happen at home… but it did not happen at home…good means…if it happens then the person will be 'normal'… They don't take good care in the government hospital. Water and all will not be alright there… so we went there [private]… Here all the family takes [the decision]…my parents, my brother… what should I say? Where they take me and go, I go there. (New mother, Bellary)

Only one woman in Bellary, who was below the poverty line, said she preferred the private hospital for comfort or safety but her family took her to the government hospital, due to an attitude that quality of care is better there:

> My dad didn't take me to private hospital. He told if anything happens in the night means nobody takes care… Here doctors will be available and will take care so he takes me to that hospital… In private hospital they take more care than government hospital and there responsibility is more I feel. Here also they take care, no matter. (Pregnant woman, Bellary)

Discordance based on an attitude that there is better quality of care at government hospitals was rare, as families generally shared the same attitudes or experiences of quality there.

Finally, a third pattern emerged in a few cases when the family had discordant preferences but the woman delivered where she chose. A couple of women preferred home delivery and were able to stay there due to a fear of the hospital as well as issues of cost. This husband states how his family wanted to go to the hospital but the pregnant wife refused and stayed home:

> Interviewer: Why and how did the delivery take place at home?
> Respondent: I told you that, I used to take her to the hospital at "Shorath" [village in Maharastra], it was a good hospital and everything was free… But she refused and said, "Why can't it take place at home", so we became silent… (Husband, Gulbarga)

Perhaps more common in this pattern of discordance were women who preferred and were able to deliver at the government hospital. Often women preferred government hospital based on previous experience and dislike of the greater cost at the private hospital. In addition, this related to the view shared in this woman's account that though the in-laws disagree, today's generation goes to government and so will she:

> I want to get it done in the government hospital. But the elders are saying it is good if you see god at home [home delivery]… Today's generation they go to hospital. (Pregnant woman, Bagalkot)

This was corroborated by others' accounts that the younger generation delivers at the hospital rather than home, as mentioned by a husband above the poverty line in Bellary:

> Nowadays, it is not like olden days women folk, as the times have changed the new generation prefer to go to hospitals only. (Husband, Bellary)

In a few other cases, similar to those with concordant views, the family preferred private for safer and better treatment than public hospitals yet took the pregnant wife/daughter to the government hospital where she wanted to deliver because of the issue of cost.

Discussion

As MNCH outcomes in parts of rural India remain below national and international targets, the Government of India has taken steps to increase skilled birth attendance and institutional deliveries [22]. Previous research has recognized the variation in preferences on delivery site among families in South Asia and the importance of considering whose voice counts most in those decisions, thus fuelling discussions around women's autonomy, household and gendered politics, and the role of men in maternal and child health [5, 15, 16, 19]. Contributing to this literature, our study has explored relational patterns on delivery-site decision-making and found three important considerations for decision-making frameworks that may inform related programs. First, there is a need for non-linear rather than linear or hierarchical decision-making models; second, increased understanding of gender roles and norms is essential to strengthen existing efforts aimed at increasing involvement of husbands in the birthing experience; and third, that factors affecting decisions on health service uptake are not mono-lithic but must be understood as shifting over time.

The first characteristic of decision-making processes to consider is that decisions on delivery site did not fit a hierarchical model, but were made relationally. Of significance was that the preferences of the pregnant woman were in many cases taken into account, even when not in agreement with their families. This contrasts with some other studies positing linear, hierarchical models of decision-making within the family, in which elders have the most important voice, followed by husbands and then young mothers [11–13]. Other researchers have more explicitly explored variability in family dynamics in decision-making, while others have suggested that decision-making roles are dependent on the level of women's "agency" or "autonomy" [5, 11, 12]. Some of these have specifically reported an association between increased autonomy of women and institutional deliveries [9, 11]. In our study, some women reported that a hospital setting was not conducive to a "normal" delivery and was unnecessary for uncomplicated deliveries; a few even stayed home against families' preference for hospital delivery. Thus it cannot be assumed that focussing on individual women's autonomy will naturally lead to increased institutional delivery. As in our study, others have also reported that husbands and wives sometimes prefer home delivery for perceived uncomplicated births [15, 23]. Conversely, we did not find that mothers-in-law always favoured home delivery [24]. Moreover, mothers-in-law continue to have an important role in decisions due to their experience and knowledge as care-givers [24]. These findings add to the growing evidence that interventions should be informed by more relational decision-making frameworks to understand multiple family members' reasons and roles in choice of delivery site.

A second relevant observation from our results is that husbands were interested and involved in the delivery-site decisions, confirming the importance of understanding socio-cultural gender norms and roles. Husbands have sometimes been seen to be less involved in decisions on pregnancy and childbirth, and studies have examined the barriers for their involvement, such as the assumption that it is a woman's domain, or when their involvement may contravene or support women's input into the decisions [5, 12, 16, 17]. In her study in a Nepali community, Brunson [15] asserted that the role of men is, "amplified as families… embrace the medical model of managing risks during and after birth". Husbands in this study prioritized quality of health personnel, safety and cost in their decisions and often favoured delivery at public or private hospitals for these reasons, rather than focussing on actual experience at delivery as the young mothers did [3, 8, 25]. Importantly, most husbands did not usually attend the births and therefore were unfamiliar with the experience and procedure of pregnancy and childbirth. Mullany [17] reports similar findings in Nepal, and suggests this may be a way of enhancing husbands' involvement. Our findings support others who have reported that husbands are often in favour of availing services at "modern" facilities, particularly deliveries perceived to be "complicated" or emergencies, and attending ANC visits or delivery if favoured by their wives [15–17]. Others have found that husband involvement has been important for delivery site decisions especially as they often have more control of financial decisions and affect whether their wives avail services [16]. Increasing husbands' involvement in MNCH in general involves changing cultural beliefs and attitudes that prevented their involvement previously [16]. Our results confirm that frameworks considering gender roles in the family and norms within the larger community are essential when designing interventions to ensure husband's involvement is a help and not a hindrance.

Finally, we found a discernable shift among all respondent-types in attitudes and behaviours surrounding delivery site. Such shifts are difficult to ascertain from cross-sectional studies but are being made evident through qualitative inquiry [15, 17]. All respondent types in our study stated that women are increasingly relying on

hospitals, which may be reflected in the growing number of institutional deliveries found across India since implementing the NRHM [26]. Reasons given for the shift include young mothers' approval of drugs to reduce pain and quicken their delivery, unavailability of services in the time when mothers-in-law were having their children, and the increased role of community health workers (mainly Accredited Social Health Activists or ASHAs) educating and advising them to avail the services. Others have suggested that a shift towards hospital deliveries may reflect increasing "cultural authority" of biomedical approaches to birth [15, 27, 28]. Coupled with efforts to enhance relational decision-making and involvement of husbands, programs to improve safe delivery must be attuned to evidence of and reasons for shifting attitudes among all family members such as those found in this study.

Our study involved some limitations. Though we followed the principle of maximizing variation to ensure the sample characteristics reflected those in the population, it was not statistically representative. We were not able to link family members to each other due to confidentiality and logistical challenges. To address this, we have aimed to categorize types of decision-making patterns by comparing preferences within and across respondent types. Coding of interviews was conducted individually, allowing the potential for researcher bias. However local stakeholders in health program and policy were consulted at all stages, including refinement of the coding structure, analysis, and interpretation of findings.

Conclusions

An appreciation of the interdependence of family members' roles in delivery site decision-making is important for creating contextually relevant MNCH interventions. Our results suggest that these interventions should be based on decision-making frameworks that consider the role of multiple family members, cultural norms around the involvement of husbands and elders, and shifts in attitudes around health service utilization. An important implication may be to complement interventions at the individual and family levels with community-level approaches, such as collective platforms for men and elders to be more engaged around MNCH issues and the prioritization of improving the health of women and infants [16, 17]. These efforts may be strengthened by further qualitative research to understand variation in household decision-making in a given cultural context, and to use these to inform population-based quantitative studies that examine trends in the social circumstances and factors associated with MNCH decisions and practices.

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