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Original Research Article

Understanding the reasons for home delivery among forest based tribal women in Heggadadevana Kote taluk of Mysuru district in Karnataka, India

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ABSTRACT

Background: Skilled care during delivery is critical in preventing maternal deaths. Although India has taken many steps to alleviate the financial burden of institutional delivery, women of low socioeconomic status in marginalized, rural communities still have a higher rate of home deliveries than national average. This paper examines characteristics of women who deliver at home in tribal communities in Mysore, Karnataka State, India.
Methods: The 69 women who had given birth at home between June 2013 and June 2017 were interviewed about their choice to deliver at home. Demographic data was compared to data obtained from all women who delivered in tribal communities in the same area and in the same time frame.
Results: The findings from this study indicate that women who deliver at home have higher gravidity, have a greater number of living children and are older than the average. Additionally, most home deliveries occur in June and occur in the night time. Lastly, most women reported that their husbands decided on their delivery site.
Conclusions: Data analysis and interviews reveal that increasing the number of institutional deliveries is a multifaceted issue that must take into account the demographic, economic and cultural factors behind the decision.

Keywords: Public health, Maternal health, Home delivery

INTRODUCTION

According to the world health organization, about 800 women die from preventable causes related to pregnancy and childbirth around the world every day, with 99% of all maternal deaths occurring in developing countries.[1] Mothers from poorer communities living in hard to reach areas still have a greater chance of dying in childbirth, 80% of which are caused by severe bleeding, infections, high blood pressure during pregnancy, complications from delivery and unsafe abortion.[1] In 2015, India contributed to about 15% of the global mortality rate.[2] Access to antenatal care during pregnancy and skilled care during delivery are critical towards preventing these complications. India has taken significant steps to reduce its maternal mortality ratio and to increase the number of births attended by skilled health workers. In addition to professional attendance during delivery, mothers who deliver in institutions have access to life saving equipment in case of a birth complication and to hygienic conditions for both the mother and child. However, despite various incentive schemes organized by the Indian government to encourage institutional delivery, studies have shown that not all women have opted for institutional delivery, especially rural women of low socioeconomic status.[3] Likelihood of a woman delivering in an institution is affected by her economic status and by her social status.[4] Thus, the issue of home delivery cannot be addressed only through government schemes that alleviate financial burden of institutional delivery. In

order to increase utilization of maternal healthcare services, specifically institutional delivery, social, environmental and cultural reasons behind delivery care-seeking must be examined for marginalized communities.

The objective of this study was to summarize characteristics of tribal women who have given birth at home between years of 2013 and 2017 in Heggadadevana Kote taluk, Mysore district, Karnataka state, India. This article also examines the socioeconomic determinants of delivery site choice through retrospective data analysis.

METHODS

Data on all deliveries in select tribal hamlets (D.B. Kuppe, N. Belthur and Badagalapura) of Heggadavena Kote subdistrict of Mysuru from June 2012 to June 2017 was collected. Data was captured on structured questionnaire that explored socioeconomic and demographic reasons for home delivery from willing participants by trained community health workers. 69 home deliveries were identified from this data set. The data were then coded and entered into Microsoft excel. The data was cleaned and analyzed with STATA. Differences in expected means and proportions between women who delivered at home and all women in the data set were calculated using binomial tests and t tests. Means from the home delivery data set were also compared against proportions established by the district level household and facility survey-4 (DLHS-4). In this survey, 1406 ever married women were given surveys on women's characteristics and maternal care.

RESULTS

Demographics

Most women who delivered at home were part of the Jenu Kuruba tribe (91%). 63% of all home deliveries occurred in D.B. Kuppe and the average distance to the nearest delivery unit was 40 km. The average age of a woman who delivered at home was higher (23.51) than the average age of all women in this data set who had given birth (22.16). In addition, women who deliver at home have had a greater number of pregnancies compared to all women who had given birth (t=4.092, p value<0.001). Women who delivered at home also had a greater number of living children than all women in the data set (t=4.26, p<0.0001) (Table 1). Lastly, 62% of women who delivered at home during the time of data collection also had delivered at home during previous pregnancies.

Time of home deliveries

The majority of home deliveries occurred in the months of June and July (28.98%). However, the majority of all deliveries in this data set also occur in the months of June and July (22.7%). Therefore, there is no significant difference between the proportion of home deliveries occurring in June and the proportion of all deliveries occurring in June. In addition to the month of delivery, the time of delivery was also examined. The majority of deliveries occurred at night time between 6:00 PM and 5:59 AM (61.3%). Assuming that half of all births should occur between 6:00 PM-5:59 AM and half of all births should occur between 6:00 AM and 5:59 PM, there are significantly more deliveries in the night time than there are in the daytime (p=0.049, alpha value=0.05, n=62).

Table 1: Gravidity and number of living children for women who had home deliveries.

Gravidity	N	Number of living children	N
1	14	0	17
2	19	1	20
3	26	2	21
4+	9	3+	6
Average	2.57	Average	1.38
Average for all deliveries, (n=714)	1.9	Average for all deliveries, (n=714)	0.76

Familial support

The majority of surveyed women who had home deliveries reported of having good family support during pregnancy (62.69%, n=67). Furthermore, the majority of women who delivered at home did not report having a family member discourage her from having institutional delivery (59.7%, n=67). For women who delivered at home, her husband was the most likely person to have decided on place of delivery (37.14%, n=35) (Table 2). Differences in number of those who reported on decision making power due to participants declining to respond.

Table 2: Distribution of delivery site decision making power in women who had delivered at home.

Variables	N	Percentages (%)
Self	9	25.71
Husband	13	37.14
Mother	8	22.86
Other	5	14.29
Total	35	

DISCUSSION

The data gathered from these home deliveries has shed light on some important characteristics of tribal women who choose to deliver at home rather at an institution. In further interviews, we have explored the reasons given by mothers for home delivery.

Gravidity

We have shown that women who give birth at home have had a greater number of pregnancies and have a greater number of living children. The association between

gravidity and home delivery may be both ways. Firstly, it may be that women who have given birth at home before are more comfortable with giving birth and therefore do not find it necessary to go to an institution. According to anthropological research, many tribal families believe that delivery is a natural and automatic phenomenon, thus not necessitating a trip to the hospital.[5] Another possible relationship between higher gravidity and home delivery is that women choose to not go to the hospital because of lack of care for existing children. In an interview conducted in N. Belthur, a woman stated that going to the hospital for delivery was made impossible because her husband was at work and her mother had to take care of her existing child. Because her support system was burdened by childcare, she did not choose to go to hospital because of lack of support. Lastly, it may be that women who deliver at home also have less access to family planning services than who deliver in institutions.

Time of delivery

Another important characteristic we found in this study was the effect of time on delivery site choices. June and July, months that see a large amount of rainfall in the region, had the greatest number of home deliveries. In one interview, a woman mentioned that her house is unreachable by ambulance if it rains because the road is too muddy. Thus, it may be that the monsoon season creates transportation barriers for women who do not live on the main road. Secondly, a significantly greater number of women who delivered at home delivered in the night time, when access to immediate transportation and familial support may be limited.

Support during pregnancy and delivery

Presence of support during pregnancy and delivery may also impact the likelihood of a woman choosing to deliver at home. Firstly, our data shows that husbands are most likely to decide where a woman will deliver. Thus, it is important that grassroot health workers and community health programs stress the importance of institutional delivery to the husbands of pregnant women. Secondly, support during delivery is also critical. In two interviews, women cited not having anyone to accompany her to the hospital as the reason for delivering at home. In both cases, the husbands were at work while the mothers/mothers-in-law were either busy or unfit to accompany her to the hospital. Thus, anticipatory arrangements need to be made to allow for an available support system during pregnancy. Lastly, our interviews revealed that traditional birth attendants (TBA) may still play a role in deliveries. In one interview, a woman spoke about TBA that was present during her birth. According to her, her TBA did not encourage her to go to the hospital during her delivery. The presence of TBAs in a community may impact likelihood of women calling for help during labor. Further research needed on this topic.

CONCLUSION

The results of this survey suggest that socio economically backward tribal women face multiple barriers towards institutional delivery. Health interventions may need to address access to resources during delivery as well as existing beliefs about delivery for both the mother and the husband. Targeted education and community-level interventions are integral towards increasing proportion of institutional deliveries in these tribal communities.

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