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TRADITIONAL BIRTH ATTENDANTS AND TRADITIONAL SKILLS OF MANAGING CHILDBIRTH COMPLICATIONS: A MIXED METHODS STUDY IN SOUTH SALMARA-MANKACHAR DISTRICT OF ASSAM, INDIA

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Abstract

Birthing process is an event that requires help of other women or trained personnel to assist the childbirth. In the past, a traditional birth attendant (TBA) used to play an important role. Even today, TBAs are an integral part of the child birthing process in developing countries or low resource setting areas. World Health Organisation (WHO), 1992 defines Traditional birth attendants (TBA) as a person, usually; a woman who assists the mother at childbirth and who initially acquired her skills in assisting childbirth by herself or by working with other TBAs. In the present day, TBAs render their service to women, especially in those places where the existing health system is not accessible, available, acceptable and affordable. TBAs also handle childbirth complications such as breech position baby, retained placenta, prolonged labour pain, resuscitation problem of newborn etc. through using their traditional knowledge. TBAs are playing an important role in many places in maternal health still, they are not acknowledged by the existing health system. Therefore, this paper was an attempt to understand different skills and techniques that TBAs hold to manage labour complications. Using Mixed methods, the study was conducted in Assam where maternal death is highest in India. South Salmara-Mankachar district of Assam was selected purposively for the study as the rate of childbirth is highest in the year of 2017-18 (HMIS).

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Introduction:

Birthing process is an event that requires help of other women or trained personnel to assist the childbirth. In the past, a traditional birth attendant (TBA) used to play an important role. Even today, TBAs are an integral part of the child birthing process in developing countries or low resource setting areas. World Health Organisation (WHO,1992) defines "Traditional birth attendants (TBA) as a person, usually; a woman who assists the mother at childbirth and who initially acquired her skills in assisting childbirth by herself or by working with other TBAs" (p. 4). In the present day, TBAs render their service to women especially in those places where the existing health system is not accessible, available, acceptable and affordable.

The word 'TBA' is often used interchangeably with traditional midwives, *dais/dhais*, indigenous midwives, and hereditary midwives. For instance, in India the Bhore committee has used the term hereditary midwives and indigenous midwives to refer to *dais*. The Bhore committee described *dai* as a woman who practices midwifery as a hereditary profession normally without training (Government of India [GoI], 1946, p. 39). Majority of Assamese speaking people use the term *"dhai"* to address TBAs.

Earlier, TBAs provide both the maternal and reproductive health services to women which gradually shifted to doctors. Globally, the change became more visible in maternal health care services after the First World War, when maternal deaths became an alarming issue. Many countries like Austria, Hungary, Germany, and Switzerland placed a restriction on TBAs' involvement in child birthing practices. These European countries introduced a short-term course and training on childbirth and introduced the concept of trained TBAs. The untrained TBAs were not permitted to assist in childbirth without the certificate. After the formation of training schools across the world, childbirth practice by the TBAs was gradually replaced by the newly recognized doctors and Auxiliary Nursing Midwife (ANM) (Marland & Faffery, 1997).

Similarly, in India, there are many studies that documented the transition of maternal health care services from the colonial era to post-colonial India. For instance, Supriya Guha (1998) discussed how child birthing process was predominated by the doctors over *dais* to provide services to pregnant women. If you look

at the history, setting up of the missionary group named Zenana Missionary in 1866 was the first step towards addressing women's health in the colonial period. In 1885, the Lady Dufferin Fund was established for providing medical relief to Indian women and training to TBAs for women in hospitals and private homes (Qadeer et al., 2014). The aim of these missionaries was to train a new cadre of midwives‖ to save the women from untrained TBAs. After the Dufferin Fund initiation, many other organisations came out to train TBAs such as Grant Medical College in Maharastra in 1877 followed by the initiation of Victoria Memorial Scholarship Fund to register and regulate TBAs in 1901 (Qadeer et al., 2014).

After independence, Bhore committee also recommended for training of TBAs because of scarcity of existing human resources. As a response to the Bhore committee recommendations, GoI in collaboration with United Nations Children's Fund (UNICEF) in 1952 implemented a TBAs training program. The TBAs who attended these training programmes received a delivery kits (Sadgopal, 2009). In 1955, the Shetty Committee suggested the training of ANM for maternal and health services. After four years of Shetty committee, Bishoff, a technical consultant recommended two types of nursing personnel. Thus, the GoI introduced 1-year Auxiliary Nursing Mother (ANM) and 3 years General Nursing Midwife (GNM) courses which brought tremendous change in childbirth practices. This trained personnel led to the gradual replacement of the position of TBA by the ANM (Chhugani, 2014).

But even after promoting institutional childbirth through SBA, there are people who approach TBAs because of many factors. It may be because of cultural, religious, social, geographical or institutional factors. This paper will discuss how TBAs manage labour complication occurred during childbirth.

Methods:

Objective of the research

The objective of the study is to understand how TBAs manage the complication of childbirth using their traditional knowledge of childbirth.

Research Design and sampling

Mixed methods research design was used for the study. Semi-structured interview was used for qualitative data collection. And questionnaire was used for quantitative data collection. The period of data collection is three months i.e. from August to October, 2018.

The study area

There are 28 States and 8 Union Territories in India. One of the states of India is Assam where Maternal Mortality Rate (MMR) is highest. A recently published report shows that the MMR of Assam is 215 in the year 2016-18 while MMR of India is 113 while Kerala has the lowest MMR i.e. 43 in the same years (GoI, 2020). The data clearly shows the poor maternal health status of Assam for which the stusy was conducted in Assam.

Based on the argument associated with childbirth at home i.e. childbirth at home causes poor maternal health, the study was conduced in the district of Assam where highest childbirth at home was reported. South Salmara-Mankachar district was selected for the research as childbirth rate at home is highest there (Health Management Information System[HMIS], 2017-18). The area covered by two Sub Centres (SC) namely Jharnachar and Jaruachar SCs of South Salmara-Mankachar were selected as highest rate of childbirth at home is highest in the mentioned SCs (data collected from Join Director of health Office, 2017-18 by the researcher to select the area for the research). The primary data has been period is 2018.

Sample design

Multi-stage sampling method was used. Purposive sampling technique was used to draw the samples from each stage to pick up the area where childbirth rate is highest. The first step of sample design was to selecting of one block from South Salmara-Mankachar. There are two blocks in South Salmara-Mankachar district i.e. Salmara block and Gazarikandi block. The secondary data of HMIS of 2017-18 shows that Salmara block has the highest childbirth rate at home. Therefore, Salmara block was selected. The second stage was to selecting one Primary Health Care (PHC) among the all PHCs that comes under Salmara Block based on the mentioned criteria. Jharnachar MPHC was selected as the rate of childbirth is highest there. The last stage is the selection of two SCs which have highest childbirth at home from the Jaruachar Mini Primary Health Centre (MPHC). Finally, Jaruachar and Jharnachar SCs (comes under Jaruachar MPHC) were selected from which the sample was drawn to collect data. The data has been collected from the TBAs and the women who have experienced childbirth at home. 6 TBAs were picked up

purposively from the selected study area. And systematic random sampling was used to draw sample for quantitative sampling. The name of the list of women childbirth at home was collected and every 2nd woman from the list was selected. The total sample for the quantitative study was 205 with a level of confidence and margin of error is 95% and 5% respectively.

Table1: Sampling design

Multi-stage sampling		
Stages	**Type of sample technique in each stage**	**Criteria**
1st stage	Purposive sampling	**Selection of District where the rate of childbirth at home is highest (Selected district: South Salmara-Mankachar)** • The rate of childbirth at home in South Salmara-Mankachar district is 60.27 which represent the highest figure out of all districts of Assam (HMIS, 2018)
2nd stage	Purposive sampling	**Selection of Block where the rate of childbirth at home is highest (Selected Block: Salmara block)** • The rate of childbirth at home is 76.9% and 43.7% in South Salmara and Gazarikandi respectively (HMIS, 2018).
3rd stage	Purposive sampling	**Selection of PHC where the rate of childbirth at home is highest (Selected PHC: Jaruachar MPHC)** • There are six institutions under South Salmara block. Jorua MPHC has the highest childbirth rate at home. The rate of childbirth at home in Jorua MPHC is 1850 (27.65%) (Primary data collected from Joint Director Office of Dhubri District
4th stage	Purposive sampling	**Selection of SC where the rate of childbirth at home is highest (Selected SC: Jaruachar and Jharnachar SCs)** • The researcher has drawn Jharnachar and Jaruachar SC come under Joruachar MPHC as being reported as the highest childbirth at home
5th stage	**For quantitative data:** Systematic random sampling:- every 2nd number from the list collected from the ANMs	Selection of women who have experienced childbirth at home **Sample size:** 205 with a level of confidence and margin of error is 95% and 5% respectively
	For qualitative data: Non-probability purposive sampling	Traditional birth attendants **Total sample: 6**

Source: Gogoi, 2017

Inclusion criteria

The inclusive criteria of the study was the women who have experienced childbirth in the last one year and the traditional birth attendants who have been assisting childbirth for at least last 10 years

Tools and Data analysis

Structured Questionnaire was used to collect quantitative data while Interview Schedule was used to collected qualitative data. Descriptive Statistical and thematic analysis was done to analyse the quantitative and qualitative data respectively using SPSS package and QDA minor software.

Result:

There is a vast difference in managing the complications of childbirth between the "modern" medical system and traditional. For TBAs, birthing is a natural process. Therefore, they prefer to tackle the complications through using their century-old method while doctors push oxytocin or refer to C-section to tackle the problems such as prolonged labour pain or breech position baby (Qadeer et al., 2014). In the present study, the researcher came to know different techniques used to manage labour complications which were narrated by the TBAs. These skills of TBAs will be discussed briefly here through the data collected and generated from the field.

Complications faced during pregnancy and labour

TBAs have mentioned some labour complications which they have seen during childbirth. These are prolonged labour pain, breech position baby, transverse position baby, unable to push, retained placenta, and resuscitation problem of newborn.

Table 2 Complications during labour as reported by mothers (multiple responses)

complication	Responses		Percent of Cases
	N	Percent	
Pain during pregnancy (Not prolonged)	3	1.9%	2.3%
prolonged labour	79	48.8%	59.4%
Breech position baby	3	1.9%	2.3%
over bleeding	26	16.0%	19.5%
Unable to push	17	10.5%	12.8%
Retained placenta	18	11.1%	13.5
Other	16	9.9%	12.0%
Total	128	100.00 %	116.40 %

Source: researcher's compilation from the Primary data

The quantitative data collected from women who have experienced childbirth at home shows that 2.3% of women were bearing pain during pregnancy, 59.4% of women suffered from prolonged labour pain, 2.3% of women delivered breech position baby, 19.5% of women suffered from over bleeding and 12.8% of women said they that they faced problem due to unable to push the baby. Along with this, 13.5% faced the problem of retained placenta.12.0% faced other complications that include twin baby, transverse position baby, baby's cord stuck around the neck, bleeding during pregnancy and pain does not increase.

The traditional methods of managing childbirth complications

We can say firmly that TBAs are preserving or carrying out their century-old knowledge and skills which they use to tackle pregnancy complications. However, it is

good to listen that TBAs become acquainted with the modern health system. They refer more complicated cases to access the modern health system which are beyond their traditional skills to manage.

Table 3 Management of complications by TBAs as reported by mothers(Multiple responses)

Different complications management techniques used by TBAs	Responses		Percent of Cases
	N	Percent	
Call ASHA	4	2.5%	3.0%
Call ANM	7	4.3%	5.2%
Refer to health institution	39	23.9%	28.9%
call ambulance	7	4.3%	5.2%
tackle by herself	79	48.5%	58.5%
uterine massage	12	7.4%	8.9%
Put finger or hair down the throat	5	3.1%	3.7%
Other	10	6.1%	7.4%
Total	163	100.0%	120.7%

Source: Researcher's compilation from primary data

The table 3 shows that 3% and 5.2% of women who have experienced childbirth at home called ASHA and ANM respectively during complication while 28.9% reported that women were referred to a health institution. On the other hand, 5.2% of women said that they called the ambulance. Moreover, 58.2% of women said that TBAs tackled themselves, 8.9% of the respondents reported of uterine massage, 3.7% said that TBA put finger or hair down the throat.

TBAs explained many traditional methods of tackling labour complications. At the same time, TBAs also revealed that they refer the women to the hospital if they could not manage. They do not refer the woman to the hospital directly during labour complications. At the beginning, TBAs use traditional way or skill to manage childbirth complications. If they could not manage the complications, then only they refer a woman to a hospital.

Prolonged labour

One TBA said that when labour pain does not increase they make the woman to take bath with cold water. According to her, when a woman feels cold, the labour pain starts increase. However, according to some TBAs increase in body temperature also increase the labour pain. To quote Kabira Khatun, 65 years old TBA -

> "One of my daughters was in pain for four days. The baby's head came out then the baby got stuck there. She stayed in this situation for four days. Still, the childbirth did not happen. Then, I scared. I was thinking if it delayed then the child and mother would not survive. So, I immediately decided and asked the family members to bring blankets. Then I made the woman sleep on the bed and put blankets on her….I asked her to tell me whenever the pain started. Someone told me to take the woman to the hospital. I denied and told her that I could assist. I did not allow to take the woman to Dhubri hospital. I asked the woman not to speak anything before and asked her to think about Allah. I will sit next to you. You just let me know when the pain starts increasing. She informed me when her labour pain increased. Then I asked her to give pressure, I pull out the baby. After sometimes, placenta (*Kheuri* and *bash* in local language) dropped off. Now, my daughter and grandson both are healthy. Both are doing well. I did not eat anything for five days. I did not even drink water. I promised myself to keep fast until the childbirth happened. "

In the above story, the TBAs said how she tackled the labour pain complication. She also used different techniques to induce labour pain. She shared that she put multiple blankets on the woman to make her feel warm which is completely opposite to the previous narrative. Nevertheless, the practice of making the woman feel warm to increase labour pain is very common. A study in Himachal Pradesh has also come up with the same finding. In Himachal Pradesh, TBAs

give black tea to the woman if labour pain does not increase. Along with this, they warm woolen cloths on fire and give foment with it on the woman's back (Qadeer et al., 2014).

The TBAs of the present study also said that they do vulva massage to increase the labour pain and to enlarge the birth canal. They use two fingers to do vulva massage which help in increasing the labour pain. The scientific reason behind the vulva massage is that it helps in releasing the oxytocin naturally in the body (Kerstin et al., 2015). On the other hand, in the hospital, however, health facilitators simply inject oxytocin to increase labour pain instantly and to augment labour pain.

Retained placenta

Besides prolonged labour, there were also cases of retained placenta. At the beginning, TBAs press the abdomen to drop off the placenta. If the placenta does not come out then they use different traditional method to drop off the placenta. TBAs put the hair of the mother in the throat to increase the pressure for nausea for drop off the placenta. One TBA named Sabana Bibi said,

> "If the placenta doesn't come out. Then, I lay down the woman and then put her hair to the throat. It gives pressure on her stomach and immediately placenta drops off. And I also press the abdomen to remove the placenta".

Though it sounds unscientific but this practice is found in many places.

Resuscitation problem

Newborn faces resuscitation problem that newborn has difficulties in breathing. 45 years old TBA named Dilwara Bibi has said that, "If the child doesn't breath, I put the placenta into the water and use to pump the placenta into the water for a few seconds…and it really works."Along with pumping the placenta, TBAs also heat the placenta to tackle resuscitation problem. Kabira Khatun, 65 years old stated that,

> "when the child doesn't breathe, I put a pan on fire to heat the pan. Then I put the placenta on the hot pan to fry the placenta. While I do this, the child starts breathing."

Here, one could raise question on placenta stimulation to revive the newborn. Placenta takes time to come out. It generally comes out within 5-20minutes. If they pump the placenta into water, then it means they wait for placenta comes out. Is not it risky for the baby to keep the baby with resuscitation problem for long times? Here one could do further research for understand the scientific validity behind the practice.

Along with placenta stimulation, in other places such as Egypt, study shows that newborns were either tapped on the back or hung by their legs to resuscitate (Darmstadt et al., 2008) (Bucher et al., 2016).

Breech position problem

TBAs do abdomen massage to manage the breech position baby. A TBA explained during the interview how she gives abdomen massage to turn the baby into the right or convenient position for childbirth. TBAs also reported that that they do not hold the baby in the neck portion. A TBA was interviewed who is 100 years old and who has 70 years of experience of assisting childbirth. It is fascinating to listen to her explanation of how she assists childbirth. It is also exciting to listen to her story of assisting her own childbirth without the presence of any assistant. She is very enthusiastic to tell various cases of assisting childbirth. She explained everything in details how she pulls the baby out. She showed me how to do abdomen massage to change the position of the baby in the womb. To quote Dilwara Bibi, 45 years old-

> "My mother-in-law took me with her. She showed me how to give abdomen massage and taught me how to do vagina examination to get an idea about the baby's position. In the case of breech position baby, I try to find out the ear of the baby with my fingers. Once I find the baby's ear then I gently try to pull out the baby. And sometimes, the baby does not come out completely. The baby gets stuck in the shoulder portion. If the baby gets stuck here, then it is a sign of danger to the mother. Then, I press on both side of the baby's shoulder slowly and gently. Again, if the baby stuck in the neck portion, then it is more dangerous. If I hold the neck to pull out the baby then the baby may die. So, I could not hold the baby's neck to get support to pull out….Therefore, I try to find out the baby's mouth. Then I try to pull the baby out through the support of the baby's mouth (pressing on both sides of the lips). Then, it

> comes out easily. I assisted many breech position babies."

Her explanation gave a distinct picture of how they assist breech position baby. When the researcher asked a student gynaecologist about breech position childbirth, she explained exactly what TBAs explained in the field. But here one could raise a question regarding safety and preventive. Do TBAs wash their hands properly? If they do not wash their hands properly it may create postpartum infection in the later stage.

Twin baby

At the beginning, it was mentioned that some TBAs learn the skills of assisting childbirth through assisting their own childbirth. One such case was reported by a TBA who started to work as a TBA after assisting her own childbirth. She stated,

> "I did my childbirth without taking anyone's help. When my first child came out, I told myself that one more child was there in the womb. I gave pressure. But the baby didn't come out. The first baby was boy and I did my own childbirth myself. The second was girl where one senior TBA helped me. I gave massage myself, tried to change the direction through oil massage but I could not. Then I asked someone to call senior TBA. She came and gave abdomen and vulva massage. After sometimes, the childbirth took place."

This shows that TBAs do abdomen massage to change the baby's position in the womb as well as vulva massage for quick childbirth.

All these traditional methods are used by TBAs to tackle labour complications such as prolonged labour, retained placenta, twined baby, breech position baby or transverse position baby, resuscitate the baby.

Discussion:

TBA used above-discussed traditional practices to manage labour complications such as prolonged labour pain, resuscitation problem, breech position baby, retained placenta, and twin baby. Though some of the practices sound unscientific and irrational, these practice frequently found all over the world among the TBAs. For instance, the practice of placenta stimulation was discussed by Mira Sadgopal (2009) and Qadeer et al., (2014). In contrary, TBAs do vulva massage which naturally helps in releasing oxytocin. In this context, Mira Sadgopal (2009) also discussed that some techniques adopted by the obstetricians to induce and manage labour pain are harmful and unnecessary compared to TBAs practices. For instance, Brazilian Cochrane Centre reported that that the hospital brings in fear and sense of violence. As a woman either gets her belly cut or her perineum (Madhivanan et al., 2010). While TBAs do vulva massage to enlarge the birth canal, the obstetricians do episiotomy to enlarge the birth canal which is one kind of obstetric violence.

Therefore, it is important to document the practices of TBAs as they play a significant role in determining child and maternal health. Moreover, there is already ample literature which suggests for the effective measure to train and improve their skills to prevent the risk practices which may cause maternal morbidity or maternal mortality. TBAs play vital roles in areas which are predominantly in rural, remote and underprivileged areas. Therefore, we could not deny their contribution to maternal health. The policymakers shall give importance to the recommendation gathered from different research studies rather abolished or overlooked the role of TBAs.

TBAs are made responsible for MMR and Infant Mortality Rate (IMR). But before blame TBAs, we have to understand why people choose TBAs for childbirth at home. Existing literature show that women do not prefer childbirth at home because of cultural, religious, social, geographical or institutional factors (Qadeer et al., 2014) (Titaley et al., 2010). For that reason, we cannot blame TBAs for high MMR and IMR where the existing health system is itself not accessible, available, and affordable. The study was conducted in *char* area of Assam where accessing health system is difficult for women mainly because of geographical factors. Though, economic and religious factors are there for childbirth at home. If TBAs do not help then, the women will be dying then and there within the *char* area. But, TBAs do not know how to handle complications such as Postpartum Hemorrhage (PPH), eclampsia, preeclampsia etc at home but if TBAs do not assist the childbirth then the pregnant women may die. Therefore, it is important to help TBAs to upgrade their existing skills through training. Training of TBA is important for early identification of complications and referring them to hospital to save woman's life. The content of the training should include what kind of best

possible actions or alternative methods are there that TBAs hold to handle the complication situation to improve maternal health where the existing health system is not available.

Conclusion and recommendation

Coverage multi-dimensional aspect while implementing any project is important to improve health of a place. The study was conducted in *char* area where accessing health facilities are impossible. Government of India is working on Boat clinic but it is not accessible to all places. Therefore, the study recommends to train TBAs of those places where accessing health facility is difficult. It will help the TBAs to not only help the women with pregnancy complication but also to identify the risk associate with it to take immediate necessary action. It is required because Accredited Social Health Activists (ASHAs) are not trained to assist childbirth. As a result pregnant women do not left any option rather than seeking help from TBAs. Otherwise pregnant women will die then and there. Instead of blaming TBAs for poor maternal health we must encourage them because they are taking care of a huge number of pregnant women who are not able to cover by the existing health system.

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