INDIGENOUS MATERNITY CARE-GIVING PRACTICE: IMPLICATIONS FOR MATERNAL, FOETAL AND NEONATAL HEALTH IN NORTHERN GHANA

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ABSTRACT

The study aimed at government efforts in making maternal and child healthcare services more available to rural women, many of whom who still seek care from traditional practitioners during the postpartum period after childbirth. In this research, we explored the role of traditional practitioners, such as Traditional Birth Attendants (TBAs), herbalists and spiritualists, in traditional maternity care and the implications for the health of the expectant mother, foetus or baby. This qualitative inquiry used purposive sampling and snowballing to select the respondents in their various localities. It was observed that the traditional practitioners performed both spiritual and medical roles during pregnancy and childbirth.

In the study, we discovered that both mothers and babies were exposed to health risks, as administration of the herbal medicines and assistance at deliveries were carried out under unhygienic conditions. The techniques used in labour management were not in compliance with the recommendations of the World Health Organisation. The stages of maternity were characterised with the application of herbal concoctions with spirituality attached.

The study recommends re-examination of mediating socio-cultural factors to professional health care. There is a need for the Ghana Health Service to ensure the efficacy and safety of herbal drugs as well as to monitor the production and application of such medicines.

Keywords: *Healthcare, Practitioners, Postpartum, Concoctions, Expectant mother*

Introduction

Human reproduction is a function of the biological and cultural make-up of the partners. Hence, religious beliefs and customs relate to birthing practices of indigenous people (1; 2; 3, 4). This forms the basis for the continuous patronage of Traditional Practitioners (TPs), especially Traditional Birth Attendants (TBAs), in rural settings (5, 6, 7, 8). The activities of the TPs, involve the use of herbal concoctions with spirituality attached (1, 9, 10, 8). Therefore, in rural areas, the various stages of maternity are characterised with the use of herbal medicines for treatment of complications and for facilitating delivery (5, 1, 8). It has been noticed that traumatic birth injuries are usually the outcome of unsafe indigenous birthing practices. For instance, it is reported that the use of *kalugotim* (herbal concoction for inducing delivery) in the Upper West. Region of Ghana enhances contractions without a corresponding dilation of the cervix and thereby, results in ruptured uterus (10). Similar practices are carried out in most African countries, as observed in Zambia and Gambia where traditional medicines and magic water are used for pain relief and rapid expulsion of babies or placentas (1, 6). Usually, the usage of these herbal substances goes concurrently with ritual performances when the woman is in labour (11, 1, 9, 10, 8, 12).

Medicinal plants may play a crucial role during the postpartum period when used in rural settings, but some herbal products are sources of hazardous substances and have both direct and indirect health risks resulting in serious illness, aggravation of existing health complications or death (13, 15, 14). This is where publicly funded health system, the interplay between policy making (macro level), healthcare organisations and the clinical encounter and technical procedures assume particular significance (16).

These risks are connected to the usage, dosage, as well as the age, genetic background of the individual, and also dependant on associated health complications. The usage of herbal medicines alongside pharmaceutical drugs is most dangerous to human health (15, 13) especially in pregnancy. A research in University of Adelaide discovered that some herbal products have serious effects on the liver and on the renal system, amongst other risks (13). This indicates that herbal medicines may contain significant amounts of toxic chemicals which could be dangerous to maternal, foetal and neonatal health. This risk is worsened by the possibility that wrong plants with high toxicity may be harvested for medicinal preparations (16, 15, 17,18, 19).

Further, the methods employed by TPs can be equally harmful to maternal, foetal and neonatal health. For instance, it is a common practice in Zambia to insert a piece of cloth into a parturient's anus to avoid the passage of babies through the anus (1). Tying clothes around the abdomen and fingering the mouth of a parturient to facilitate speedy expulsion of the baby are common in traditional birthing practices (5, 11, 1). Forced gagging, hard manual pressure on the abdomen and pulling of the umbilical cord have been observed to be associated with maternal morbidity and mortality (11). Amongst the Awutu ethnic group in Ghana, to facilitate delivery, injection with herbal extracts from the barks, roots or leaves of plants usually mixed with ginger, chili and garlic, is a common practice. (20). In prolonged labour or retention of placenta, women are made to blow into empty bottles whilst lying on cow dung with a stone fastened to her umbilical cord as she is fed with mint and animal oil (5). Multiple vaginal examinations with the use of injectable oxytocic medications to augment the birth canal and to reposition unborn babies are common harmful traditional birthing practices (10, 11). The fact that maternal deaths are more associated with home birthing than facility-based delivery means that lack of knowledge and technology in competence of the health care-giver (21, 22, 23, 24) can affect maternal and neonatal health. Unlike institutional birthing (11), traditional birthing is associated with delivery under unhygienic conditions, and with forced expulsion of babies and placentas, which are harmful to maternal and child health (25, 26, 27, 28, 29).

Soon after babies are expelled with different techniques, substances and materials are used to treat mothers and the babies. For example, some TPs use bamboo sticks (12), sugarcane peels (*Maimbolwa),* etc, to cut the umbilical cord. There is a high possibility of incorrect ways of carrying out pressure and traction on the umbilical cord by unskilled attendants (11). In Ghana, cultural as well as religious beliefs play a role in the type of care pregnant women receive. Therefore, herbalists, spiritualists and TBAs are all engaged in the traditional system of maternal healthcare (3, 30, 31, 32, 33). Though previous studies highlight the involvement of TBAs in maternity care, there is a dearth of knowledge about the methods, materials, substances and processes involved in traditional birthing (35, 3, 36, 34, 30). However, the role of herbalists and spiritualists who form an integral part of traditional maternity care (3) has not received enough attention. Above all, available literature on the implications of traditional birthing methods for maternal, foetal and neonatal health in Ghana is inadequate. This study fills these gaps by exploring the role of traditional practitioners in indigenous maternity care and by explaining the health implications of the methods, materials and substances used by traditional practitioners.

Materials and Methods

In this research, we used an exploratory, cross-sectional and qualitative approach. Culturally appropriate approach was adopted for data collection and analysis. The primary purpose of this study was to explore and discuss the role of traditional practitioners in indigenous maternity care and the implications for maternal, foetal and neonatal health. The design was chosen to provide an enabling environment for TBAs, herbalists and spiritualists to express their candid views on how treatment and management of complications, as well as deliveries, are handled outside the health facility.

Methods, sampling and data collection

We sampled and interviewed 15 traditional practitioners in each of two study sites - the Yendi Municipality and Chereponi District of the Northern Region of Ghana. The TPs comprised 5 TBAs, 5 herbalists and 5 spiritualists from each setting totalling 30 individual interviews. These participants were purposively sampled in their respective communities using snowballing and non-proportional quota sampling techniques.

Ethical consideration

Ethical clearance ethical clearance was sought from the Postgraduate Research Committee of the Faculty of Social Sciences, Universiti Malaysia Sarawak. As research ethics and the Ghanaian custom demand, permission was sought from the chiefs and assembly members of the communities and husbands or household heads of the TBAs before commencement of data collection. The purpose and importance of the research outcome were explained to both the community leaders and participants and each participant was given a consent form to sign or thumb print and assured of anonymity and confidentiality before the interview sessions. However, for fear of legal implications, some participants refused to sign or thumb-print the informed consent forms and were given verbal informed consent with witnesses.

Analysis

The study was programmed to allow for expansion of field notes and transcription of recorded data after each interview session, at most within 24 hours. This served as a guide for subsequent data collection as the initial analysis suggested change of questioning. Participants were easily

contacted for clarity in cases where important information was missing. To ensure trustworthiness and dependability, the research employed strategies such as reflexivity during the preparation of the research design and questions, data collection process and the stages of analysis. Also, it was strategised to make sure that only participants willing to offer data were considered for interviews to avoid false information. Iterative questioning was employed to ensure that deliberate lies were uncovered during the interactions.

Inductive thematic analysis was the major framework for analysing the data. Both audio-taping and hand written data were collected as some participants refused to be audio-taped. Inter-coder analysis was employed, using the results of ATLAS t.i.v.7 software application and manual coding system. Final coding was done by judging the outcomes of the two techniques. Similar thoughts experienced across the participants were identified, coded and grouped together. Out of each group of similar thoughts, a unifying concept or underlying theme was derived. Key points, phrases, and illustrations were also identified to back up the findings. Finally, emerging themes that are similar were grouped together to come up with major themes through a consultative process among authors.

Results

The role of the traditional practitioners involves both medical and spiritual approaches. For instance, the herbalists and the spiritualists were engaged in preparation and prescription of herbal medicines, whilst the TBAs used such prescriptions as instructed by their local 'pharmacists', and administered them on the women. Moreover, prescriptions of the herbal concoctions were based on the spiritual research findings of the herbalists and spiritualists, and the TBAs assisted in treating the women with such concoctions. Below are the views of a herbalist:

> ''Oh my son*, I have worked as a herbalist for over 30 years now. I know which herbs to combine to treat various kinds of diseases. Sometimes we mixed the herbs with drugs from chemical shops to make them more effective. But our prescription is always based on what we see in the spiritual realm. You may not have any idea about some herbs but the spirits will direct you to use it for treatment. So we direct the TBAs to follow the right way to give to women'' (Herbalist, 70 years, no formal education, African Traditional Religion).

In all communities, the prenatal, intrapartum and postpartum stages were characterised with ritual performances, sacrifices and injection or ingestion of substances usually of herbal derivation. The following views, as expressed by one TBA, were repeated by all the TBAs interviewed:

> ''...For sacrifices, normally it is the husbands or the herbalists and spiritualists themselves who perform them. But there are some rituals that they direct us the women to perform on pregnant women. Apart from that, we apply the herbs by giving them orally, or by injecting them into the pregnant women or parturient...'' (68 years, TBA, MSLC, Muslim).

There were also evidences of the usage of pharmaceutical drugs alongside herbal products within the postpartum period. Whilst some of the pharmaceutical chemicals were prescribed by health professionals, others were self-prescribed and administered in combination with the herbal medicines, especially based on previous prescriptions. A spiritualist said:

> ''Yes, some women drink medicine from hospital in addition to our herbs. We discourage them but they do. Before we ask them to use any pharmaceutical product alongside herbs, we know how the two work together. We also confirm the safety of what we give to women from the spiritual world before giving them'' (Spiritualist, 59 years, African Traditional Religion)

Practices in the prenatal stages involved examination of the expectant mother and the foetus by the TBAs using bare hands to determine the position of the foetus, and the health status of both mother and foetus. This stage was also associated with injection and ingestion of herbal derivatives using syringes to treat complications such as abdominal pains, infections, bleeding, constipation and for cleansing of the reproduction system. These injections or ingestions were made up of extracts from roots, barks and leaves, garlic, ginger and chili, and mixed with water. *Moss*i, a local beverage made from herbs, was administered to pregnant women as blood tonic. This was shared by a TBA:

> ''Yes, we use bare hands on the tummy to find out if the baby is doing well in the womb. We give the women the herbs that their husbands bring from the spiritualists and herbalists, to drink or by injection, to treat constipation, abdominal pains or infections'' (59 years old, TBA, MSLC, Muslim).

The delivery stage was characterised with multiple vaginal examinations either to determine the position of the foetus, or for removal of the baby and placenta during obstructed labour, prolonged labour or delay in placental expulsion.

> "Hmm... My son, we have complained for years but they don't mind us. We don't have gloves. We use bare hands to help women to deliver. We insert the bare fingers into the vagina to pull out the baby or placenta when there is a delay. Same thing is done when cutting the cord. Meanwhile, when the professionals came to talk to us some years back, they told us to refrain from that behaviour; yet, they won't provide the necessary materials for birthing. Apart from washing our hands in water with soap, we don't do anything to protect ourselves or the women and the babies" (Trained TBA,59 years, MSLC, Muslim).

The TBAs also administered *gmanchey, datari or ayiribiri,* which are herbal concoctions used in prolonged labour or placental retention, for lubricating the reproductive system for rapid expulsion of the baby or placenta.

> "When a woman is in difficulty during labour, we give her *ayiribiri* to drink. The husband will bring the *ayiribiri* and give to us to give to the woman. Normally, the men do not witness delivery. The herbs help the woman to deliver fast. We also apply it when the placenta is retained." (62 years, no formal education, ATR).

Old soft garments were spread in the room around the parturient, with some in the hands of the TBAs waiting for expulsion, to safely receive the baby as the parturient is kneeling down and pushing.

> "The women kneel down and bend while they push. The kneeling is better than squatting, especially for women who have not given birth before. Inexperienced women may not have patience when squatting and could harm the baby when it is coming out and we don't notice it early. We normally rely on the men to give treatment but when they are not ready with the medicines and we realise the baby is about to come out, we proceed to help the woman without the husband's consent." (TBA, 62 years, no formal education, African Traditional Religion).

Immediately after the baby was delivered, the baby was given herbal concoctions to drink for protection and the umbilical cord was cut using blades and tied with threads with bare hands. The baby was then bathed and the room washed with soap and dettol antiseptic in rare cases. A TBA said:

> ''After delivery, we cut the cord using blade and a thread is used to tie it. Then a herbal preparation mixed with shea butter is applied to the cord. The baby is bathed with soap and warm water, and after that, we apply powder to the neck, armpit and genital area. After bathing the baby, we use old cloths to mob the floor with water and soap. After that, we normally use powder or perfume on the floor" (59 years, TBA, MSLC, Christian).

To control postpartum haemorrhage, management of third stage of labour involved fundal massaging using towels soaked in hot water which was applied on the lower abdomen after spreading shea butter on the surface. A piece of garment was tied around the abdomen and the hot towel was pressed on the abdomen every morning and evening till the woman was fully healed. Local gin known as *akpeteshie,* was mixed with some herbal sources and given to the woman to drink before eating. Apart from giving the mother appetite, this was to help heal the wounds, cleanse the reproductive system and treat infections. The following was expressed by a TBA:

> "We give the TBAs special herbs mixed with 'akpeteshie', to treat women after delivery so that the reproductive system will be cleansed. All clotted and stagnated blood in the system will be solubilized and passed out. These herbs also control excessive bleeding after birth and heal the wounds in the body. Moreover, the woman develops an appetite to eat food." (70 years, herbalist, no formal education, Muslim).

Discussion

Our study sought to bring fresh insights to the analysis of indigenous birthing practices which involve the use of herbal medicines during maternity; such practices were observed to be spiritually-oriented and culturally-driven. Apart from assisting in deliveries and occasionally making referrals to clinical experts for skilled care, the traditional practitioners (TPs), especially the TBAs, offered important support, psychologically and emotionally, to the women by empathising with them-this formed a source of encouragement to the parturients to endure pain in labour. Systematic evaluation of recent studies showed that empathy was beneficial to the health of the women and their babies (5, 7, 37), and, that this support was either lacking or inadequate in facility-based health care (39, 10, 38, 37). However, injection and ingestion of herbal concoctions (40, 10, 36) such as *gmanchey, ayiribiri, datari, akpeteshie herb-mixed,* and the application of spiritual powers (10, 36) to induce delivery, as evidenced in the study, could be harmful to the parturients and their babies. The problems of facility-based health care, are a result of in-country migration (rural to urban), as well as emigration of health workers from Ghana, that inevitably left the poor, rural and deprived areas worse off in terms of access to quality health care (41).

In our analysis, we discovered that the TPs' activities delayed the parturients in seeking medical care during obstructed or prolonged labour and retention of placenta. This delay was dangerous for maternal and neonatal health. Obstructed labour can result in prolonged labour leading to prolonged pressure on the bladder, the outcome of which is severe damage to the lower genital track causing a false passage between the bladder and the vagina, and the woman suffers incontinence of urine and poor bowel control (42, 10). Again, although the chemical components of some herbs may be good for women in pregnancy (43) or delivery (10), others can be present in sufficient amounts to cause death (42, 10), especially when pregnant women consume excessive amounts (44). Obstructed or prolonged labour and retention of placenta are life-threatening complications requiring the expertise of obstetricians. It is harmful to handle such conditions under home care because the TPs cannot determine the foetal position with the use of only bare hands on the abdomen and with multiple vaginal examinations during labour, as observed in the study.

None of the herbalists and spiritualists had a license to operate as an herbal drug supplies. Our analysis lends support to the argument that neither were the TBAs registered or trained. Again, their herbal products were not subjected to any laboratory investigations or clinical trials

to ascertain efficacy, safety, dosage, chemical composition and expiry date. This implies that the expectant and nursing mothers or their foetuses and babies may suffer the risk of over dosage with these substances. The observed practice of applying herbal concoctions to newly born babies, immediately after birth, may be dangerous to the baby's health. Other researchers corroborate that these concoctions may contain harmful substances or contaminants that can and cause ill-health to the baby (45, 46). Research showed a positive association between the use of herbal products in pregnancy and foetal ill-health (47, 48). Moreover, using *akpeteshie herb-mixed* (local gin mixed with herbs) during lactation is also hazardous to babies because they feed on what their mothers eat. Studies showed that any amount of alcohol in breast milk is not safe for a baby to drink, and exposure even to small amounts of alcohol in breast milk causes disturbances in the sleeping behaviours of infants (49). There was no evidence that alcohol intake for expectant and nursing mothers was measured in the study. The baby is exposed to higher risks of the consequences of alcohol consumption because of its age and its size of body organs (50).

The TPs handled some pregnancies and related complications at home. But they were not in the best position to handle obstetric complications because they were less likely to recognise most maternal complications (51). For instance, they could not perform amniocentesis to establish the state of the foetal health. They could not ascertain whether a pregnant woman needs blood or not, and they could not perform blood transfusion. Additionally, the chemical components, efficacy, and safety of the *mossi* (herbal beverage), administered in pregnancy as blood supplement, is unknown and its effect on the woman and her foetus remains to be investigated. The Northern Region of Ghana, is leading in anaemic cases, especially in newborns. (33). Although malaria, malnutrition and genetic conditions are possible factors, over reliance on the use of *mossi,* as blood supplement in pregnancy, could contribute to this situation. TPs cannot detect some health conditions and give treatment. For instance, they cannot detect HIV and AIDS and prevent mother to child transmission.

The birthing environment was not hygienic enough. There were no evidences of the use of gloves or sterilisers, and Dettol antiseptic was used in rare occasions. The commonest substance used to control infections was soap mixed with water which, in some emergency situations, was even neglected. Using bare hands in multiple vaginal examinations, clamping and cutting of the umbilical cord and the stoical removal of baby or placenta from the womb are all subject to infections (11, 31). This has been observed to have heavily contributed to maternal morbidity and mortality (11; 52). Hence, puerperal sepsis, a likely outcome of this practice, is the sixth leading cause of death amongst new mothers (52, 58). Healthcare providers must wear sterile gloves in order to avoid the risk of contamination with the patients' blood and other fluids (53), especially in the advent of HIV and AIDS and hepatitis B. The TBAs could also be infected with the said diseases in the process of offering assistance at birth to an infected parturient. It was also observed that the TBAs did not consider cord pulsation in the clamping and cutting of the cord. Clamping and cutting of the cord at least within 1-3 minutes after birth for improvement of blood haemoglobin of the infant is recommended (54, 57). Delayed cord clamping enhances baby's weight, haemoglobin level which is capable of sustaining the baby for about 3-6 months (40), and improves maternal and infant health and nutrition outcomes (54).

Most of the babies delivered at home were denied the opportunity of receiving vitamin K (clotting factor), because the mothers either delayed postnatal care (PNC) attendance for ritual confinement or they did not attend PNC at all. This increased the susceptibility of the newborns to bleeding disorders, because vitamin K prophylaxis is safe and prevents bleeding-related diseases in newborns (42, 57).

Fundal massaging with a hot towel on the abdomen, the use of *akpeteshie herb-mixed* (local gin mixed with herbs) and a piece of cloth tied around the abdomen after spontaneous delivery of the placenta, or inserting fingers to bring the baby out, defies WHO recommendations. Active management of third stage labour should involve injection of oxytocin to the mother after delivery, and the performance of controlled cord traction to control postpartum haemorrhage (54).

Even though they played a lifesaving role where health professionals were absent, the TPs performed activities that to the substances and techniques employed, but these activities also reduced the number of clinical visits, delayed or denied antenatal care, skilled delivery care and postnatal care. This partially explained why Northern Ghana recorded the highest number of anaemia cases in babies (33), maternal deaths and home deliveries in the country for two consecutive years (55, 56).

Conclusion

The various stages of maternity were characterised with the use of herbal concoctions and spirituality, based on the cultures of the communities. This situation was an outcome of dualism of beliefs embedded in their cultures which facilitated dualism of care, a practice structurally located within the ethnic groups and cultures. There is urgent need for reconsideration of the application of delays model especially in rural healthcare, by examining socio-cultural structural conditions that inhibit women's use of skilled care services. Traditional leaders as well as religious leaders from Christianity, Islam and the African Traditional Religion should be actively involved in rural maternal healthcare programmes. Also, husbands and traditional practitioners including TBAs should be enlisted to promote professional healthcare. The Ghana Health Service should work in collaboration with the Food and Drugs Authority to encourage and monitor drugs produced by the herbalists and spiritualists. Moreover, the TBAs especially, need to be trained and be provided with sterilisers and gloves,

to assist deliveries in emergency situations where health professionals are not around. The TPs should have assistance to laboratory testing and clinical trials of their herbal products to ensure safety and efficacy.

Competing interests

The authors declare that they have no competing interests.

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