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ABSTRACT

***Objectives*: To describe the roles of Traditional Birth Attendants (TBAs), to determine the perceptions of TBAs and Skilled Birth Attendants (SBAs) towards the policy discouraging home delivery by TBAs and to establish the working relationship between TBAs and SBAs in Kwale, Kenya.**
***Design*: Community based cross-sectional study.**
***Setting*: Mwaluphamba, Kinango and Golini locations of Kwale County, Kenya.**
***Subjects*: Fifty eight participants were involved in the study. Interviews were conducted with 22 TBAs and 8 SBAs as well as 3 FGDs with 28 TBAs were carried out in July 2012.**
***Main outcome measures*: Roles of TBAs, policy awareness and support as well as the working relationship between TBAs and SBAs.**
***Results*: Before delivery, the main role of TBAs was checking position of the baby in the womb (86%) while during delivery, the main role was stomach massage (64%). However, majority (95%) of the TBAs did not provide any after delivery. All SBAs and 59% of TBAs were aware of the policy while 88% SBAs and 36% of TBAs supported it. The working relationship between TBAs and SBAs mainly involved the referral of women to health facilities (HFs). Sometimes, TBAs accompanied women to the HF offering emotional support until after delivery.**
***Conclusion*: TBAs in Kwale have a big role to play especially during pregnancy and delivery periods. Awareness and support of the policy as well as the collaboration between SBAs and TBAs should be enhanced in Kwale.**

INTRODUCTION

The fifth Millenium Development Goal (MDG) aims to improve maternal health, with the targets of reducing maternal mortality ratio (MMR) by 75% between 1990 and 2015 and achieving universal access to reproductive health by 2015 (1). An essential strategy for reducing the high maternal mortality ratio is to ensure that all births are managed by skilled health professionals (2). In developing regions overall, the proportion of deliveries attended by skilled health personnel rose from 55% in 1990 to 65% in 2009. Despite dramatic progress in many regions, coverage remains low in sub-Saharan Africa and Southern Asia, where the majority of maternal deaths occur (3). These two regions accounted for 85% of the global maternal deaths, with sub-Saharan Africa alone accounting for 56% (1).

In many of these countries with large numbers of maternal deaths, high quality maternity care is often unavailable (4) and many deliveries are attended to by a Traditional Birth Attendant (TBA), a relative, or, in some settings, no one. Home birth remains a strong preference and often is the only option (5). In many

areas, childbearing women who do not give birth in a clinical setting rely upon TBAs who may have received formal training or have gained experience by assisting neighbours, friends and family members to give birth. Many of these TBAs have helped with the births of nearly entire generations in the villages (6), their social role in communities is recognised and respected, and therefore, their attendance is highly valued (7).

Traditional Birth Attendants have been involved in national and international health programmes with a peak of interventions in the 1970s and 1980s. The enthusiasm declined in the 1990s with a debate on their cost-effectiveness and the missing impact of TBAs training to reduce maternal mortality. By 1997, senior policy makers decided to shift priorities on the provision of Skilled Birth Attendants (SBA). The definition of SBA excluded TBAs and resulted in subsequent withdrawal of funding for TBA training and exclusion of TBAs in policies and programmes worldwide (8). This has evolved from emphasis on training of TBAs in developing countries in the late 1950s and 1960s, to a recommendation that TBAs work with the health-care system, to a recommendation that they be integrated into the health system via training, supervision and technical support, to today's position of promoting professionally skilled attendance at all births (9).

In Kenya, the MDG 5 set the target for reducing maternal deaths from 414 per 100,000 live births in 2003 to 147 per 100,000 live births by 2015. However, the 2008-9 Kenya Demographic and Health Survey (KDHS) found these maternal deaths to be 448 per 100,000 live births which was an increase from 2003 (414 per 100,000 live births) (2). The survey also reported that 43% of births in Kenya were conducted in a health facility (HF), while 56% of births took place at home, many of which (28%) occurred under the attendance of a TBA. Mothers in rural areas were more than twice as likely to deliver at home compared to those in urban areas. The proportion of births assisted by medically trained personnel increased only marginally from 42% in 2003 to 44% in the 2008-9 survey (2).

In October 2007, Kenya's Ministry of Health formally approved and adopted the country's first ever National Reproductive Health Policy (10). The policy's focus on strengthening community midwifery practice and helping TBAs become advocates of safe motherhood was to contribute to enhanced maternal health. Traditional Birth Attendants are encouraged to escort the women to health facilities and are allowed to provide emotional support to women in labour but should not assist in delivery at home (10). However, this has faced several challenges one of them being the poor relationship between TBAs and SBAs. However, TBAs still continue to practice home delivery and women continue seeking antenatal care (ANC), delivery and even postnatal care (PNC) from TBAs.

Considering global and national interests in the MDG and Kenya's high level of maternal mortality, the study aimed at describing the roles of TBAs in Kwale, understanding the perceptions that TBAs and SBAs had towards the policy discouraging home delivery by TBAs and establishing the current relationship between SBAs and TBAs as well as identifying ways of improved collaboration. This study provided an avenue for the participants to voice their opinions regarding the policy and also provided information for enhancing collaboration between SBAs and TBAs based on their own views and suggestions.

MATERIALS AND METHODS

Study design: A cross-sectional study was conducted in July 2012.

Study area: Kwale, which is located on the Indian Ocean coastline, is one of the 47 Counties in Kenya. The study was carried out in three administrative locations in Kwale; Kinango, Mwaluphamba and Golini which are covered by the on-going Kwale Health and Demographic Surveillance System (HDSS) managed by Nagasaki University Institute of Tropical Medicine - Kenya Medical Research Institute (NUITM-KEMRI) (Figure 1). Data such as total population, birth, death, migration and pregnancy as well as other relevant health information are collected regularly. Further details about this HDSS can be found in another paper (11).

Study Population: The study population consisted of two groups namely; SBAs working in health facilities within the Kwale HDSS who were directly involved in maternity services and TBAs who had assisted at least one woman during childbirth within the Kwale HDSS. Identification of TBAs and SBAs was based on the following WHO definitions. A TBA is "a person who assists the mother during childbirth and who initially acquired her skills by delivering babies herself or by working with other TBAs" while an SBA is "an accredited health professional – such as a midwife, doctor or nurse – who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and new-borns" (12).

Sampling procedure: Purposive sampling was used to select TBAs initially from a list of known TBAs which were obtained from health facilities. Snowballing technique was then used to recruit other TBAs. A sample of 22 TBAs participated in the semi-structured interviews.

Skilled Birth Attendants were purposively sampled from health facilities that offered antenatal, delivery and postnatal services within the HDSS area. These included two district hospitals, one health centre and two dispensaries. In total, eight SBAs were available to participate in the study. They included two SBAs from each of three HFs and one SBA from each of the remaining two HFs.

Focus group discussions (FGDs) were conducted with TBAs only in order to get more information that was not captured by the interviews. It was difficult to get all SBAs, who were very much on demand in their work stations, together in one sitting to participate in a FGD hence no FGD was done with them. TBAs were selected purposively from the list of known TBAs based on where they lived so that they did not have to travel far to participate. The TBAs who participated in the interviews were not the same as the ones who participated in the FGDs. One FGD was conducted in each of the three locations. Twenty-eight TBAs (ten in Mwaluphamba, eight in Kinango and ten in Golini), ranging in age from 28 to 70 were involved in the study.

Data collection and analysis: Data were collected using semi-structured interviews including both open-ended and closed questions and FGDs by the principal investigator and two research assistants. The questionnaires and FGD guides contained sections on the participants' background, training, roles during antenatal, delivery and post-delivery care practices as well as perceptions about the policy.

Once the interviews were complete, they were entered into a Microsoft Excel ((Microsoft Office 2010; Microsoft Corporation, Redmond, WA) and cleaning was done, after which responses were sorted out into homogeneous categories appropriate to the objectives of the study. Descriptive summary statistics were prepared. Statistical analysis was performed using STATA version 12 (Stata Corporation, USA).

The FGDs were facilitated by a moderator and two research assistants (responsible for video recording and notes-taking). The recordings were then transcribed and translated. To ensure confidentiality, data were recorded anonymously by using a code number and then subjected to thematic content analysis which was done manually using Microsoft Word following a method described by LaPelle (2004) (13). Major themes that emerged from these FGDs included: roles of TBAs, the awareness and support of the policy and the relationship between TBAs and SBAs.

Ethical Considerations: The study was undertaken after obtaining approval from both the Scientific Steering Committee (SSC number 2160) and the Ethical Review Committee (ERC) of KEMRI which grant approval for research studies involving human subjects. Before taking part in the study, all participants signed informed consent forms.

RESULTS

Background Characteristics of Traditional Birth Attendants: Baseline characteristics of TBAs are presented in Table 1. The vast majority (77%) of these TBAs were above 40 years of age. In the preceding month, majority (72%) of the TBAs had attended to more than one pregnant woman. Almost all TBAs interviewed (95%) had no formal education. However, six (27%) TBAs had previously undergone midwifery training from a non-governmental organisation based in Kwale while 16 (73%) had not.

Table 1
Socio-demographic, Work and Training Characteristics of Traditional Birth Attendants

Characteristics	Number (%) n=22
Age (years)	
40 and below	5 (22.7)
41-50	9 (40.9)
51 and above	8 (36.4)
Religion	
Christianity	3 (13.6)
Islam	19 (86.4)
Education level	
No formal education	21 (95.5)
College	1 (4.6)
Marital Status	

Married	19 (86.4)
Separated	1 (4.6)
Widowed	2 (9.1)
Pregnant women assisted in preceding month	
0	4 (18.2)
1	2 (9.1)
2	9 (40.9)
3 and above	7 (31.8)
Women assisted in delivery in preceding month	
0	4 (18.2)
1	5 (22.7)
2	8 (36.4)
3 and above	5 (22.7)
TBAs who had undergone training	
Yes	6 (27.3)
No	16 (72.7)

Background Characteristics of Skilled Birth Attendants: Interviews were done with eight SBAs from the health facilities within the study area that provided maternity (ANC, delivery and PNC) services. Among the SBAs, half of them were males. It was also observed that 75% were nurses and 25% clinical officers. Majority (75%) of the SBAs had worked in the respective HFs for more than two years, Table 2.

Table 2
Background Characteristics of Skilled Birth Attendants

Characteristics	Number (%) (n = 8)
Sex	
Male	4 (50.0)
Female	4 (50.0)
Religion	
Christianity	6 (75.0)
Islam	2 (25.0)
Duration worked at that HF (years)	
Less than 2	2 (25.0)
2-4	2 (25.0)
5-7	1 (12.5)
More than 7	3 (37.5)
Designation	
Clinical Officer	2 (25.0)
Nurse	6 (75.0)
Health Facility Level	
District hospital	4 (50.0)
Health centre	1 (12.5)
Dispensary	3 (37.5)

Roles of TBAs: Role of TBAs emerged in three major categories; before delivery (pregnancy), during delivery (referring to the period between when the woman was in labour to when she went home with the baby) and after delivery (the period after the mother went home with her baby).

Before delivery, the main roles reported by the TBAs included checking position of the baby in the mother's womb (86%), checking health of the pregnant woman (77%), and advising pregnant mother to go to a HF (68%). During delivery, the main roles included stomach massage (64%), emotional support during delivery (59%), actual delivery assistance (27%) and checking on the stage of labour of the mother (18%). After delivery majority (95%) of the TBAs reported that they did not assist the women in any post-natal care. One TBA, however, mentioned that she visited some of her clients after delivery to check on the progress of the mother and her baby. Table 3 summarises these roles.

Table 3
Roles of Traditional Birth Attendants

Characteristics	Number (%) (n=22)
During pregnancy	
Checking position of the unborn baby	19 (86.4)
Checking health of the pregnant woman	17 (77.3)
Advising pregnant mother to go to a HF	15 (68.2)
Massaging mother's stomach	9 (40.9)
Checking progress of the pregnancy	3 (13.6)
During delivery	
Stomach massage	14 (63.6)
Emotional support during delivery	13 (59.1)
Delivery assistance	6 (27.3)
Checking on stage of labour	4 (18.2)
Others	4 (18.2)
After delivery	
Assess progress of mother and baby	1 (4.6)
None	22 (95.5)

Focus Group Discussions: Role of TBAs emerged in the three previously mentioned categories. Before delivery, TBAs reported checking the health status of the mother and checking for the status of the unborn baby were their major roles. Others that were less frequently reported included stomach massage, checking the progress of the pregnancy and referring women to hospital especially when a problem was detected. Checking the health status of the mother involved examining the woman for signs of abnormality such as the ones described by one TBA.
"I check the eyes, nails. I check for signs of weakness in her body then I can tell that she has some problems. I then tell her that she should go to hospital. I look at the blood vessels in the eyes. When one has shortage of blood the eyes are completely white and the lips also turn white" (Mwaluphamba TBA 1).

Checking the status of the unborn baby in the womb involved ensuring the unborn baby was in the proper position, determining whether the baby was alive or dead in the womb or even whether or not the mother was carrying twins.

The main activities during delivery included preparing tools needed for delivery, monitoring signs of delivery, assisting in process of delivery, giving herbal medicine, cleaning the baby and dealing with placenta after delivery. This was described by a TBA below.
"When she comes to my house, I spread a canvas sheet on the floor for her. I wear gloves, prepare the string and razor, then I cut the umbilical cord and remove the placenta when the baby is out" (Mwaluphamba TBA 1).

Some TBAs reported that they accompanied mothers to the HFs when women went to them for delivery (like the TBA below) while others took the women to the HF only when there was a complication or for vaccination immediately after the baby was born.

"What I normally do when they send for me, I get there and assist her if she delivers within roughly an hour. If she does not give birth after about 2 hours, I take her to hospital even if it means walking her there. If she delivers on the way, well and good, but I do not stay with her for long" (Golini TBA 2).

After delivery, majority of the TBA reported that most women took their babies to HFs for PNC after delivery. However, the time when PNC after delivery was sought was not specified. Some TBAs pointed out that they visited some women and their babies after delivery.

"I just pay a visit to the mother and the baby. In most cases they go to hospital for care after delivery" (Kinango TBA1).

In their line of work, TBAs encountered several challenges. The main one being that most women they assisted did not pay the TBAs anything for their services forcing them to use their own resources to assist them. The few who paid, did so in form of money or gifts showing that the TBAs did not do their work for payment but rather to assist.

"At the TBA's house she might stay for a several days before finally giving birth. The TBA has to provide food, paraffin, soap, water for bathing and take care of her until she delivers. After delivery the mother says thank you, gives you a date when she can pay then disappears. The next time you will see her is when she is pregnant again" (Mwaluphamba TBA 7).

Other challenges included their inadequate skills to deal with some complications as well as the lack of proper tools.

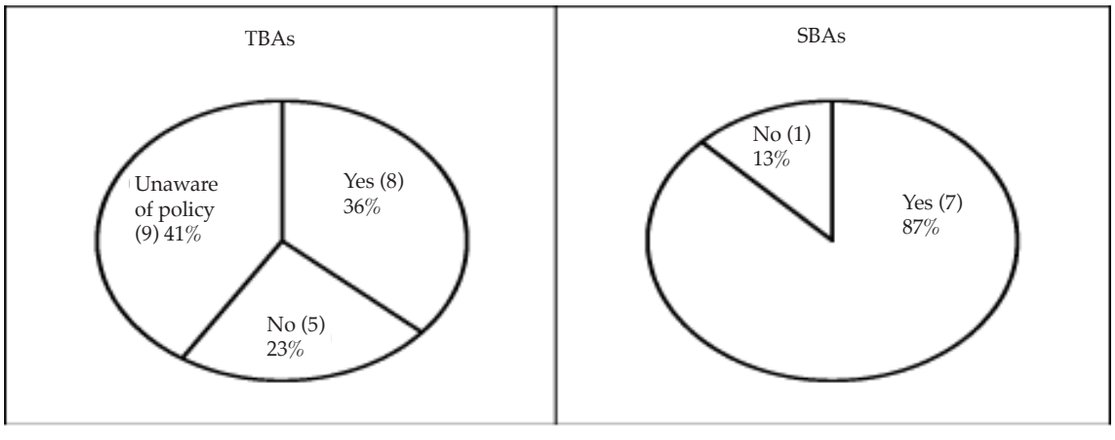
"During delivery when the woman is pushing for the baby to come out, the baby comes out stomach first showing the umbilical cord. In that case, the TBA can see the cord but cannot do anything. It is a sign that the baby is coming out in the wrong position. In another case, when the mother is pushing instead of the baby coming out what comes out is the baby's faeces. A TBA cannot not help her because this means the baby is sitting within the womb and is therefore is in the wrong position. Thus you have to refer her to a hospital" (Mwaluphamba TBA 7).

Some TBAs explained that another challenge was the disappointment women got from TBAs especially when the TBAs advised them to go to HFs yet they did not want hence they delivered at home either with assistance from relatives or alone.

Policy on Traditional Birth Attendants: Results showed that all SBAs were aware of the policy discouraging home delivery by TBAs while only thirteen (59%) TBAs were aware of it. On the other hand, eight (36%) TBAs and seven (88%) SBAs supported the policy (Figure 2).

Figure 2

Pie chart showing level of support for the policy by both TBAs and SBAs



Several reasons were given explaining why TBAs and SBAs did or did not support the policy Table 4.

Table 4
Reasons indicating whether or not TBAs and SBAs supported the policy

Reasons for supporting policy		Reasons for not supporting policy	
TBAs	n=8 (%)		n=5 (%)
Avoid complications during delivery	2 (25)	women lack money to go the health facility	1 (20)
Reduction of risk of disease transmission	4 (50)	Health facilities are too far	3 (60)
TBAs have inadequate skills and tools	2 (25)	No reason given	1 (20)
Total	8 (100)		5 (100)
SBAs	n=7 (%)		n=1 (%)
TBAs lack adequate knowledge and skills for delivery	2 (28.6)	TBAs should be trained and supported	1 (100)
Policy will reduce maternal mortality	4 (57.1)		
Policy will reduce HIV/AIDS transmission during delivery	1 (14.3)		
Total	7 (100)		1 (100)

In the FGDs, majority of the TBAs were aware of the policy. However, some of them claimed they had heard about it but did not understand exactly what it meant. A reason given by one TBA was that some time back they were supported but at that time the policy discouraged what they did causing confusion.
"I did not understand it. I get confused because first, they want TBAs then later they tell us we are not wanted. I do not understand them" (Kinango TBA 2).
Some TBAs opinion about the policy was that it would only work if the Government puts in place some measures. This was quoted by one woman.
"If it is to work there should be more health facilities, provision of education to the TBAs and reduction of fees in the hospitals" (Mwaluphamba TBA 1).

Working Relationship of TBAs and SBAs: All the SBAs who were interviewed reported that they had some sort of working relationship with TBAs. In fact, three (38%) SBAs had received women referred to them by TBAs during the month before the interview was conducted. The most common way reported by five (63%) SBAs of collaboration with TBAs was by receiving women referred to the health facilities by TBAs and allowing TBAs to provide emotional support to the women in labour. The same was reported in the FGD. In Mwaluphamba location, some of the TBAs in the FGDs worked as Community Health Workers and had regular meetings with SBAs.

In the interviews, 19 (86%) of TBAs reported that collaboration between SBAs and themselves should be improved. Ways that were proposed to facilitate this included holding meetings with SBAs to brainstorm ways of improving maternal health, TBAs and SBAs to hold meetings with members of the community to educate them on safe delivery practices, training of TBAs on proper care of women and provision of tools to TBAs.

Most TBAs agreed that enhanced collaboration with SBAs was necessary. They requested for support in terms of training, provision of tools such as gloves, being allowed to assist in the delivery process at HF level.
"We would like to be educated on some things. For example when a baby shows signs of coming out, some TBAs cannot tell the difference between the buttock and the head of the baby. A doctor can explain the difference. Also how to determine if the baby is sick or is doing well within the womb. When I go to the SBA and I am asked about the situation (of a mother), I can explain and we (TBA and SBA) can work together to help the mother. We need to be taught on different equipment and their uses, danger signs of the mother and what they mean" (Kinango TBA 2).

Training of TBAs has been a contentious issue. However it was found that some TBAs actually applied what they were taught as described by this TBA.
"During the training we were taught that when the pregnant mother is in pain we should not massage her. If you massage the placenta becomes thin and she might bleed. So if someone sends for me nowadays I do not massage. I just monitor her until it's time for delivery. I am not as skilled as a doctor" (Golini TBA 2).

In return some suggested they could assist SBAs in distributing bed nets, referring and accompanying of women to HFs for example by communicating with SBAs when a woman is in labour, implementing anything they are taught during training sessions. One TBA went further to recommend what the Government should do facilitate collaboration between SBAs and TBAs.

"Ask the Government to build more health facilities and provide transport to the health facilities. These health facilities should expand such that when a mother is about to deliver at night I can communicate with the SBA to send a vehicle to pick up the mother and transport her to the health facility" (Kinango TBA 4).

DISCUSSION

Skilled attendance at childbirth is crucial for decreasing maternal and neonatal mortality, yet many women in low- and middle-income countries deliver outside of health facilities, without skilled help (14). Where skilled birth attendance is not readily available, TBAs are commonly used to assist women during pregnancy, delivery and sometimes after delivery. This study showed that TBAs were still an important provider of care in the community in Kwale.

Before delivery, common roles reported by TBAs and women in both qualitative and quantitative studies included checking for the status of the unborn baby, stomach massage, checking the progress of the pregnancy and referring women to hospital especially when a problem was detected. These were similar to a study on village birth attendants in Papua New Guinea (15). In addition, Falle *et al*., found that during antenatal visits, TBAs provided advice on diet and immunisations. In that study, the greatest impact on improving maternal and child health is the role TBAs perform in encouraging women to attend antenatal clinics thereby allowing the detection and appropriate management of high risk pregnancies (16).

A major role of TBAs during delivery reported was assisting in the process of delivery. This role encompassed a multitude of activities which were not dealt with here. However, in other studies, it was found that these activities included delivering the baby and the placenta, cutting the cord and washing the newborn (16). Referral of women to HFs again showed that TBAs were not against HF delivery and in fact, encouraged it. In both interviews and FGDS, most TBAs reported that after delivery, most of these women did not go back to them to assist in checking the health of the mothers and babies. This is a challenge to the health system because unless these mothers and children visited health facilities where records are kept, there are possibilities of deaths occurring at home. These would be difficult to track interfering with country level mortality estimates thus interventions planned to address maternal and child issues may not be very effective due to these poor estimates.

It is argued that this change in policy direction in Kenya and other countries occurred without rigorous evidence that it would improve the Maternal and Newborn Mortality Rate (MNMR). Furthermore, this change was based on lower grade evidence that is historical, observational and experiential and has impacted on sub-Saharan African women more than any other population group. Contrary to expectations, policy changes have failed to make the anticipated improvement in MNMR (17). In the study, six years after the policy was put into place, some TBAs were still not aware of the policy yet they were the ones who are most affected by it. This showed that changes at the policy level alone was not enough to change the practices of individuals in Kwale. Sensitisation of community members including TBAs, women and their family members regarding the policy should be improved.

The level of support for the policy by TBAs was also not overwhelmingly high either because of the confusion (their activities were not being encouraged as before) or the health infrastructure was not adequate enough to encourage women to deliver at health facilities. In Ghana, a study showed that referral alone may not work. In a rural health project, where TBAs had been trained and supervised since 1973, many TBAs routinely performed high risk deliveries even though they had been taught to refer them to higher level care. When TBAs did refer, a significant proportion of their patients did not comply with the referral advice. Reasons for non-compliance included financial constraints, lack of transportation and fear of disrespectful or painful treatment from medical staff (18). The government therefore has a major role to play in improving the health infrastructure of a country. This may be done by reducing fees at health facilities, increasing coverage of health facilities and the number of SBAs, improving the transport network, raising the socio-economic status of women and improving provision of health education to women especially on the importance of visiting health facilities for maternity services.

In Tanzania, the fear of being referred to hospital by TBAs, which was also a reason given in this study, was a major cause of home deliveries. This shows that discouraging TBAs alone will not solve the problem (19). Women also need to understand the importance of health facility delivery and they should also be educated on the same.

Most TBAs in the study agreed that collaboration

with SBAs was necessary. At the time of the study, the main collaboration was in form of TBAs referring women to SBAs which was clearly not enough as evidenced by the high proportion of home deliveries. Traditional Birth Attendants provided suggestions on how they can be assisted as well as how they can assist SBAs more effectively. Similar suggestions of how TBAs can be integrated into the health system were described in a document by WHO (12) and those more specific to the Kenyan context were highlighted in the Safe Motherhood Policy alert (20).

In Western province of Kenya, it was found that utilisation of facilities improved where there was good partnership between health facilities and the community. Where health care providers had a positive attitude towards TBAs, the likelihood of TBAs bringing women to the health facilities increased when problems occurred. Some facilities in the study provided small incentives to TBAs to escort women in labour to the facility and provide psychosocial support during labour (20). Another study in Kenya recommended that to be effective, the usual assumed roles must be reversed so the TBA becomes the teacher and expert in 'out of hospital' care. The SBA, with an attitude of cultural humility, could learn from the TBA how to be with and support labouring women in the community. Time spent with TBAs would have the secondary benefit of increasing understanding of why the majority of women preferred to deliver outside the hospital with a TBA. Both SBAs and TBAs should have the opportunity to communicate and learn from each other in the home/community and hospital setting as equal partners (17). Such collaboration will help to provide access to the full range of care women and/or their newborns may need, thus ensuring the required continuum of care. The collaboration must be based on mutual respect and recognition of the specific contribution each type of care provider makes to the continuum of care (12).

Since TBAs already exist in many developing country communities, it has been suggested that they could perform the role of the skilled attendant, where required with some training. Even though some research indicates that training of TBAs has not contributed to reduction of maternal mortality, it is recognized that in some countries such as Malaysia (21), TBAs can become an important element in a country's safe motherhood strategy and can serve as key partners for increasing the number of births at which a skilled attendant is present (12). While trained TBAs are not considered skilled birth attendants (SBAs), their potential contribution has been recognised in diagnosing labour, ensuring clean delivery, detecting and referring maternal complications, providing hygienic cord-care and ensuring warmth of the newborn, supporting early exclusive breastfeeding, and providing advice on a number of topics (22).

In the quantitative study, six (27%) TBAs had undergone previously formal midwifery training. The TBAs demonstrated positive attitudes toward and welcomed further training on birth assistantship and pregnancy management. This positive attitude was also described in a study by Izugbara *et al*.(2009), where TBAs who had benefited from such training spoke glowingly of the many useful things they learnt as well as how such training made a difference in their work. They confirmed referring or personally taking some of their clients who needed special care to some public hospitals in the city and having them promptly attended to (23).

In the past, training programmes for TBAs were conducted but unfortunately, this program was phased out following the Ministry of Health recommendation and instead approved community midwives, who have retired from its service, to replace them as the only professionals to deliver women with uncomplicated cases outside health facilities. As a result, several TBAs particularly the new ones, whose services are being widely used, have not attended any training programmes and their ability to conduct a safe delivery remains uncertain (24). Discontinuing training for the potential TBAs who are actually capable to provide appropriate care has been claimed to bring more harm than good (5).

Potential source of bias is if the participants were giving answers that the interviewers needed to hear especially since it was a policy issue. However, before the start of the FGDs and interviewers it was made very clear that no harm would come to them as a result of participating in the study. Another limitation may have been due to recall bias. It was observed that more detailed information on roles of TBAs could have been obtained by asking what they did during their last session they had involving antenatal care, delivery or post-natal care like the study carried out by Falle *et al*., in 2009 (16).

All countries can move to a skilled-attendant-for-all model of service delivery and providing skilled care for all needs to be seen as a non-negotiable national priority. To build national and local consensus, dialogue must take place with all concerned on the reasons for making the skilled attendant programme a national priority. Once this basic issue has been agreed upon, then policies and programmes can be developed or modified (12) .

In conclusion, Traditional Birth Attendants continue to play an important part in maternal health in Kwale. The study showed that introducing a policy

without proper sensitisation of those affected and improvement of other aspects of the health system is not enough to make substantial contribution to reducing maternal mortality. The study showed that there was need for an effective collaborative approach in order to increase the pace towards reducing maternal mortality. Various stakeholders including the Government, SBAs, TBAs, women as well as the community have different roles to play in order to reach this goal. Findings of this study could be utilised to inform health policymakers and health care providers in order to find measures to improve maternal survival in this region.

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