Cultural Norms Create a Preference for Traditional Birth Attendants and Hinder Health Facility-based Childbirth in Indonesia and Ethiopia: A Qualitative Inter-country Study

Introduction

Developing countries in Asia and sub-Saharan Africa accounted for approximately 99% (302, 000) of the global maternal deaths in 2015 (WHO, UNICEF, UNFPA, World Bank, UN, 2015). Maternal ill-health remains a major public health problem in Asia and Africa, including Indonesia and Ethiopia. Improvement of maternal and child health is therefore a priority in both countries.

Both Indonesia and Ethiopia have shown progress in the reduction of their maternal mortality rate (MMR). The MMR in Indonesia was reduced from 228 deaths per 100.000 live births in 2007 to 126 deaths per 100,000 live births in 2015. However, this MMR is still higher than many Southeast Asian countries with a GDP per capita similar to Indonesia (UNICEF, 2016a). Several strategic programmes has been implemented by the Indonesian government to improve maternal health in the country. These includes the community health centres (*Puskesmas*), the village midwife programme and the monthly community integrated health outreach (*Posyandu*). These programmes are aimed to provide maternal health services to the communities and to reduce maternal mortality in the country (Achadi et al, 2007; D'Ambruoso, 2012; Limato et al, 2018; Nasir et al, 2016; Tumbelaka et al, 2018).

Progress in decreasing maternal deaths has also occurred in Ethiopia, where the MMR has reduced from 676 deaths per 100,000 live births in 2007 to 353 deaths per 100,000 live births in 2015 (UNICEF, 2016b). Nonetheless, it is also still among the highest in sub-Saharan Africa. In 2004, the Government of Ethiopia introduced the Health Extension Program (HEP), under which over 38,000 Health Extension Workers (HEWs) were deployed to provide quality promotive, preventive and selected curative health services at the community level (Fetene et al, 2016). The HEP pays special attention to mothers and children at the household level (Addisalem and Meaza, 2012; Kea et al, 2018).

A decentralised health system exists in both countries. The decentralisation policy was established in 1991 in Ethiopia (Asmelash, 2000; Hagmann, 2005) and in 2001 in Indonesia (Heywood and Choi, 2010; Nordholt, 2005). Decentralisation has implications for governance and affects health services, since the reallocation of authority and resources from national to sub-national governments increases the power and role of local governments in managing health care

(Asmelash, 2000; Heywood and Choi, 2010; McCollum et al, 2018). A comparison between Indonesia and Ethiopia in terms of country background, government structure, health status and health structure is provided in Table 1.

Table1 Comparison between Indonesian and Ethiopia

Comparison	**Indonesia**	**Ethiopia**
Context, norms and government structure	- 255.18 million people (2017), lower middle-income country - GDP per capita, 3878 - A Muslim majority country - Archipelago (17 000 islands) with a wide geographic, socioeconomic and disease burden disparities across the country -Wide health service coverage since early 1980s and outcome disparities - Former centralised government - Little authority or autonomy prior to devolution	- 108.29 million people (2017), low income country - GDP per capita, 783 USD - A Christian majority country - Landlocked with a wide geographic, socioeconomic and disease burden disparities across the country -Wide health service coverage since early 2000s and outcome disparities - Former centralised government - Little authority or autonomy prior to devolution
Health status and health structure	- High MMR, 126 deaths per 100,000 live births - Higher than most Southeast Asian countries with GDP per capita similar to Indonesia - Community Health Centre and community health workers (e.g. *Posyandu kader*) play a crucial role particularly in rural and peri-urban areas - Traditional birth attendant (TBA) care for pregnant mothers still exists, particularly in rural and peri-urban areas (Nasir et al, 2014; UNICEF 2016a)	- High MMR, 353 deaths per 100,000 live births - Among the highest in sub-Saharan Africa - Health Extension Program and community health workers (HEWs) play a crucial role particularly in rural and peri-urban areas - TBA care for pregnant mothers still exists, particularly in rural and peri-urban areas (Kea et al, 2014; UNICEF 2016b)

An important priority to decrease MMR in Indonesia and Ethiopia has been the drive to increase health facility-based childbirth (D'Ambruoso, 2012; Worku et al, 2013) and to reduce reliance on

TBAs. Health facility or institution-based childbirth has increased in both countries in the period between 2010 to 2015, from 15% to 26% in Ethiopia and from 69% to 81% in Indonesia (UNICEF 2016a; UNICEF, 2016b). However, cultural barriers to institutional birthing e.g. traditional beliefs, preference for TBA care and services and male-dominated decision-making related to childbirth persists in someareas in both countries (Belton et al, 2014; Bohren et al, 2014; Gilson,2007; Mesfin et al, 2004; Shiferaw et al, 2013). These cultural barriers interplay with other barriers such as geographical and financial challenges that hinder pregnant women from giving birth in a health facility (Kea et al, 2014, 2018; Nasir et al, 2014, 2016; O'Connell et al, 2015).

In this paper, we explored cultural barriers to health facility-based childbirth in selected study sites in Indonesia and Ethiopia. We also examined the potential of partnership between formal close-to-community (CTC) maternal health workers e.g. village midwives and village health volunteers (*Posyandu kader*) with TBAs in Indonesia as well as the partnership of health extension workers (HEWs) with TBAs in Ethiopia.

Methods

Qualitative design and phenomenology approach in particular were used to explore cultural barriers that prevent pregnant mothers from giving birth in a health facility. Phenomenology is an approach to qualitative research that focuses to understand human experience within particular community group in responding to particular events that involve perceptions, thoughts, actions, reflections and memories (Green and Thorogood, 2013). The fundamental goal of phenomenology is to facilitate a detailed description and deeper analysis of the lived experience of a particular group of people and of the nature or complexity of a particular phenomenon (Corbin and Strauss, 2015).

Study setting

This study was part of REACHOUT, an eight-country consortium aimed at exploring the effectiveness, efficiency and equity of community health providers' services in rural and urban areas of six partner countries in Asia and Africa (Kea et al, 2018; Nasir et al, 2016). Under REACHOUT, Indonesia and Ethiopia were selected for the exploration of barriers to health facility-based childbirth because the primary focus in both countries was on improving maternal

health in rural and peri-urban areas by strengthening community-level maternal health service provision

Indonesia: The selected study sites were in four villages in Southwest Sumba district in East Nusatenggara province and four villages in Cianjur district, West Java province. The four villages in each district were purposively selected for differences in proximity to the community health centre (*Puskesmas*) and differences in the levels of health facility-based childbirth. In 2015, the population of Southwest Sumba was 240,818 and served by ten *Puskesmas.* The population of Cianjur was 2,335,000, and they were served by 45 *Puskesmas* (Cianjur Bureau of Statistics, 2016; Southwest Sumba Bureau of Statistics, 2016).

Ethiopia: The study was conducted in six districts of Sidama Zone, Southern Ethiopia, selected based on diversity in maternal health performance and distance from the zonal capital, Hawassa. Sidama Zone is one of the most densely populated zones in the southern region of the country with a population of over three million. It is served by two public hospitals, 109 health centres and seven clinics (Yassin et al, 2013). At the *kebele* (smallest administrative structure) level there are 522 health posts (Kea et al, 2014). Each health post is served by two HEWs to reach an average of 5,000 people. Health posts are connected to their catchment health centres by a referral system

Data collection

Qualitative data were collected using semi-structured interviews (SSIs) and focus group discussions (FGDs). Topic guides for SSIs and FGSs were developed from the REACHOUT general framework (Kok et al, 2014) and discussed through serial workshops with relevant stakeholders e.g. health officers in the District Health Offices and Community Health Centres as well as coordinators of village-based volunteers in the study sites in Indonesia and Ethiopia. Local data collectors were trained over one week in qualitative data collection, to enable them to understand and utilise the topic guides. Topic guides covered questions and probes related to the roles of CTC maternal health providers, barriers and facilitators to childbirth in health facilities and the dynamics of decision-making related to pregnancy and childbirth.

The SSIs took between 45 - 60 minutes to complete. FGDs were conducted by the research assistants or senior researchers and took between 60 - 90 minutes. Participants were compensated

by the provision of meals or refreshments and transport costs. Verbal informed consent was obtained from all the participants. The language spoken by the participant in their respective country was used to obtain consent. SSIs were conducted either in the participant's house or participant's office. FGDs were held in village meeting venues that provided sufficient space for 6 to 12 people.

Participants and sampling

Participants were selected via purposive sampling. Workshops were organised in the study sites with officers from the district health offices and community health centres in Indonesia and Ethiopia. The information provided by the stakeholders about suitable participants in the study sites was utilised by the data collectors to recruit the participants.

In Indonesia, 110 SSIs and 7 FGDs were conducted in four villages in Southwest Sumba and four villages in Cianjur. The informants included village midwives, *Posyandu kader*, TBAs, mothers, husbands, male community members, Heads of Villages and District Health Officials (Table 2).

Table 2 Number of participants in Southwest Sumba and Cianjur, Indonesia (SSIs and FGDs)

Methods	**Participants**	**Number in Southwest Sumba**	**Number in Cianjur**	**Total**
SSIs	Village Midwives Village Nurses *Posyandukader* TBAs Village heads and Heads of Family Welfare Movement (PKK) Head of *Puskesmas* Midwife coordinators Head of District Maternal Health Section Mothers Men in community	7 2 11 8 9 2 2 1 23	8 - 8 - 8 2 2 - 16	
Total		65	45	110 SSIs
FGDs	Village Midwives Men in community TBAs	1 (10 participants) 2 (8 for each FGDs) -	- 2 (8 for each FGD) 2 FGDs (7 for each FGD)	
Total		3 FGDs (26 participants)	4 FGDs (30 participants)	7 FGDs (56 participants)

In Ethiopia, 44 SSIs and 14 FGDs were conducted with purposively selected health professionals, HEWs, community members, TBAs, local *kebele* administrators (Table 3).

Table 3 Number of participants in Sidama Zone, south Ethiopia (SSIs and FGDs)

Methods	Participants	Number per district	Number of districts	Total
SSIs	HEWs	2	6	12
	Mothers	2	6	12
	TBAs	1	6	6
	Kebele Administrators	0 or 1	3	3
	Health center heads/delivery case team leaders	1	6	6
	HEP Coordinators at Woreda Health Office	0 or 1	3	3
	Zonal HEP coordinators	NA	NA	1
	Regional HEP coordinators	NA	NA	1
Total				44 SSIs
FGDs	HEWs	1	6 (8 for each FGD)	6
	Women	1	6 (7 for each FGD)	6
	Men	1	2 (8 for each FGD)	2
Total				14 FGDs (106 participants)

Data analysis

All SSIs and FGDs were recorded, transcribed and translated into English. The accuracy and quality of English translations were checked by research assistants and senior researchers to ensure that the translations reflect the initial meaning of participants narratives. Transcripts were read and re-read independently by a team of researchers to identify key themes to develop a common coding framework with additional codes added by each country in REACHOUT consortium to reflect context and areas that rose inductively. We allocated codes such as challenges to health facility-based childbirth, the role of CTC maternal health workers, preference for TBAs, and decision making related to the place of giving birth for pregnant mothers, to better understand the phenomenon of various cultural barriers to institutional childbirth in the study sites.

The coded transcripts were entered and analysed using Nvivo 10 software. Employing a thematic approach (Corbin and Strauss, 2015; Green and Thorogood, 2013), data were further analysed, 'charted' in themes and sub-themes and summarised in narratives for each theme and sub-theme. The narratives led to further questions and associations between the themes, that addressed the objectives of the study.

Ethical approval

In Indonesia, ethical approval was obtained from the ethical committee of the Eijkman Institute for Molecular Biology in Jakarta and Hasanuddin University in Makassar. In Ethiopia, ethical approval was obtained from the Research and Technology Transfer Core Process of South Nation Nationalities and Peoples Region Health Bureau. Permission to conduct the study was also obtained from Cianjur and Southwest Sumba Health Office (Indonesia) as well as zonal health department and Woreda Health Offices (Ethiopia). In addition, ethical approval that covered REACHOUT in both countries was obtained from the Royal Tropical Institute (KIT) Amsterdam, The Netherlands, and Liverpool School of Tropical Medicine, UK. These ethical procedures ensured that data collection and publications related to the study respected ethical issues such as voluntary based participation, anonymity and confidentiality.

Results

In both countries, four themes emerged related to barriers to health facility-based childbirth i.e. cultural and religious beliefs, shyness and privacy, decision-making linked to pregnancy and childbirth, and preferences for TBA services. We also found that the dynamics between TBA, CTC maternal health providers and village midwife services influenced the pregnant women's preferences of birthing services.

Cultural and religious beliefs

In the context of the two countries, cultural and religious beliefs played an important role in health-seeking behaviour related to the place of childbirth and hindered pregnant women from giving birth at a health facility. In Southwest Sumba in Indonesia, despite Christianity being the predominant religion, the traditional belief is *Marapu*, in which ancestors are perceived sacred and beliefs in ancestral powers influence practices in the villages. Accordingly, attendance at health facilities for antenatal care or birthing and the use of modern medical practices is considered offensive to sacred ancestral wishes and many believe that it may harm the current pregnancy or cause future infertility. "*Our ancestors won't allow it. It can cause miscarriage, or they [women] can't get pregnant again in the future"* (SSI, Village Head, Southwest Sumba).

In Cianjur, Indonesia, a Muslim predominant population, leaving the house to give birth is considered a taboo by many women. Therefore, they prefer to give birth at home and village midwives noted this was a particularly pronounced belief for those living remotely or with limited education. *"We believe that it is dangerous to leave the house when we are pregnant, particularly in the afternoon or evening. Our ancestors said that pregnant women who leave the house are vulnerable for black magic"*(FGD, Women, Cianjur).

In Sidama, Ethiopia, religious beliefs affected the views on maternal health issues and maternal health-seeking behaviour. Maternal and child death were sometimes justified by community members as 'due to the will of God' rather than something over which they had control. Some informants, despite being educated about the importance of institutional childbirth, held the belief that God would protect them, and therefore they felt it was not necessary to seek health care services. "*The problem is, even though some people have awareness, they don't want to show this behaviour in practice. They say 'God will help the mother'*" (SSI, HEW, Sidama).

Additionally, in Sidama, many people still had the traditional belief that a woman is expected to give birth at home. Women described how they should follow the same practice as their mothers and ancestors. "*They don't want to get it* [give birth at health facility]. *They complain that these are not the experiences of our women in the past"* (FGD, Women, Sidama).

The emphasis by men was also on the stigma attached to the health facility. "*They look at this place* [health post] *as sinful and they go home to give birth"* (FGD, Husbands, Sidama).

Culture of shyness and privacy

In Sidama, Ethiopia, and to some extent in the Indonesian study sites, the emphasis on privacy held by the expectant mothers emerged as a cultural barrier to health facility-based childbirth. A sense of secrecy or shyness also prevented some women from seeking maternal health services. In Ethiopian setting it was common to conceal the pregnancy until the fifth or sixth month, without disclosure to anyone else other than one's own husband. This concealment limits the seeking timely antenatal care by the pregnant women. One woman even reported her hesitancy to tell her husband about her being pregnant, assuming he would figure it out for himself. "*In our culture we don't want to talk to people about pregnancy. People should know after the birth of the baby or when our belly becomes big"* (SSI, Mother, Sidama).

In addition, concerns about not wanting to be seen by unfamiliar health professionals affected the attendance at maternal health services by some women. The reason why some of the expectant mothers did not want to give birth at the health facility was because they felt uncomfortable exposing their body to unfamiliar persons. Moreover, some HEWs mentioned that women did not want to give birth in health facilities, because they believed they would be required to use the delivery bed, which they believed would expose them and make them vulnerable to illness. "*I think it's because the mothers don't want to expose their body to other people. They say: 'We don't want to, because we have seen when we take someone there* [the health centre], *they are putting them* [the mothers] *on the bed, exposing their body. I will give birth at home. Let God not bring such a thing on me. I want to be inside my blanket and give birth freely"* (SSI, HEW, Sidama).

Likewise issues of privacy and shyness were also expressed by several informants in Indonesia.

"My three children were born at home because I was not comfortable to be seen naked by other people. At home I gave birth in my own room, I can wear my own sarong, and was assisted by people that I am familiar with" (FGD, Women, Cianjur).

"There are still many women here who are shy and not want to be touched, particularly their private part, by other people. That's one reason why they prefer to give birth at home" (SSI, Head of *Puskesmas*, Southwest Sumba).

Decision-making related to pregnancy and childbirth

Decision-making related to pregnancy and childbirth was highly gendered and patriarchal norms limited decision-making power of women in both countries. In Indonesia, informants described the crucial role taken by husbands and elder female family members regarding the decision about the place of birthing and seeking the service of TBAs.

"It was my husband's decision. If he had decided I cannot refuse" (SSI, Mother, Southwest Sumba).

"The midwife made a date prediction and assignment about who will assist the childbirth. The mother obeyed. However, on the due date she was not the one who made the decision but the

husband, mother in law or mother of pregnant woman. If the husband insisted to have the baby with the [TBA] *service, she will just obey"* (SSI, Manager, Cianjur).

In Ethiopia, several informants indicated that husbands were not supportive of their wives during pregnancy, even subjecting them to verbal abuse if they disobey their wishes. *"In some cases, their husbands did not allow them to go to the health facility. There was a woman whose labour I managed, at that time her husband was not at home. He came to the health post and shouted at his wife"* (SSI, HEW, Sidama).

Preference for TBAs

Although Indonesian and Ethiopian governments have released a regulation to ban the TBAs from assisting childbirth, preference for TBA care during pregnancy and for birthing exists in the study sites in both countries. The most common reasons for preference for TBA-assisted childbirth stated by informants in Indonesia were: trust given to the TBAs because of their age and long experience; the comfort of birthing in the privacy of their own home; and adherence to traditional practices, as illustrated by these quotes:

"[The TBA] *helps the labour in the pregnant woman's house, so it could be in their own room andwith the room door closed. She also let the pregnant woman wear a sarong."* (SSI, Mother, Southwest Sumba).

"We cannot ignore the fact that they have a bigger trust from the society. The community tends to consider the 'paraji' [TBA] *as a mother or grandmother"* (SSI, Midwife Coordinator, Cianjur).

The geographical proximity of the TBA to the home of pregnant women was another important factor. This was the case in remote areas of Cianjur, despite more village midwives including private midwives being available in Cianjur compared to Southwest Sumba. "*My wife gave birth in the night and the midwife was not there at night, and there was no transportation to go the Puskesmas* [Community Health Services]. *So, she finally gave birth at home assisted by the 'paraji'* [TBA]*"* (FGD, Husbands, Cianjur).

Islamic praying provided by TBAs in Cianjur, which is thought to protect the pregnant mothers from black magic also plays an important role in choosing TBA care. Herbal medicines

(commonly named *jamu* in Cianjur), the provision of tamarind infused hot water baths post-delivery in Southwest Sumba as well as the antenatal and postnatal massages performed by the TBAs were also mentioned as reasons for preference for TBAs.

"The community still believes strongly in the 'paraji' [TBA] *because 'paraji' sends the prayers for the safety of both the mother and the baby. Another thing the mothers like is because they also give massage and* jamu*"* (SSI, Village Head, Cianjur).

"I felt nauseous when I was pregnant. I also lost my appetite. After getting the massage from a TBA, I felt better and got my appetite again. She [TBA] *gave a good massage at my belly. After I got the massage I felt more relaxed"* (SSI, Mother, Southwest Sumba).

Although pregnant women understood the advantages of village midwifeservices, informants in both Southwest Sumba and Cianjur felt there was a lack of responsiveness to traditional beliefs and practices at the formal health facilities. "*My wife gave birth at home. The* Puskesmas *was limited. For example, no warm water. Here we believe in the custom for mothers to have a bath with warm water after giving birth*" (FGD, Husbands,Southwest Sumba).

Narratives related to preference for TBA care in Ethiopia were not as strong as in Indonesia. However, TBAs in Sidama also continued to be a preferred choice for maternal health service provision in the rural community. TBAs were often involved in a range of service provision in the community, supporting the HEWs on services such as antenatal, delivery and postnatal care.

"*The TBAs are famous in here, so people say 'the known devil is more than unknown God', and the people believe in them"* (FGD, HEWs, Sidama).

"They [TBAs] provide good care. Because of this reason I always use the TBA services, including for birthing" (FGD, Women, Sidama).

Partnership between formal CTC providers and TBAs

Some level of partnership between the different types of CTC providers in maternal health programs was found in both Indonesia and Ethiopia. In Southwest Sumba and Cianjur, the partnership between the village midwife, *Posyandu kader* and TBAs was aimed at encouraging pregnant women to come to the *Posyandu* for antenatal care and to give birth in health facilities.

In Cianjur, midwives understood the value of collaborating with TBAs as they are trusted by the community due to the long-standing position within the community, and they reported that collaboration was the best outcome for mothers. *"It is just a fact that 'paraji'* [TBAs] *are already here before we came. They are popular because they already serve the community much longer than us. If we* [village midwives] *communicate and work together with them, it is good for us and the community. We focus on childbirth and they can provide other things such as prayer, massage or herbal medicine. If they trust us they also can help us to persuade pregnant mothers to give birth in the* Puskesmas [community health centre]. *I myself allowed 'paraji' to accompany me in the* Puskesmas *while I assist the expectant mother to give birth. The expectant was happy, so as the 'paraji' and me"* (SSI, Village Midwife, Cianjur).

Similarly, cooperation between midwives and TBAs was also demonstrated in Southwest Sumba where the current policy aimed to increase health facility delivery and prohibited childbirth assisted by TBA. *"Now TBAs aren't allowed to help pregnant women to give birth...If there is any pain or uneasiness in their pregnancy, the TBA's role is to suggest the pregnant mother to go to* Puskesmas *for examination and to encourage her that she should give birth at the health facility"* (SSI, *Posyandukader*, Southwest Sumba).

The role of social-recognition incentives for TBAs who collaborated with village midwives was important as well as the initiative by the midwives to explain that the current regulation states that it is the midwives' responsibility to assist the delivery but the contributions of the TBAs are still respected. *"...If somebody reported that they* [pregnant mothers] *missed their period, some TBAs informed me. If there is somebody about to give birth, they also reported to me. Now they also can have some incentive from midwives if they accompanied the pregnant mother to the* Puskesmas" (SSI, Village Midwife, Southwest Sumba).

Collaboration challenges occurred in cases where TBAs felt that their traditional roles were under threat. *"At the beginning when we said that TBAs cannot assist childbirth anymore, just collaborate with us, they were worried that they won't be used anymore. But then we explained that they can remain doing their tasks like massaging or taking care of the baby"* (SSI, Village Midwife, Southwest Sumba).

HEWs and the TBAs in Ethiopia also showed partnership to coordinate services in the community. "*The relation we have with the TBAs is changing. They already stopped helping pregnant mothers to give birth. Some TBAs refer expectant mothers to the health post*" (SSI, HEW, Sidama).

Similar to observations in Indonesia, the partnership between HEWs and TBAs in Sidama had challenges. Some TBAs stated that they faced problems with HEWs on acceptance and support of their work.*"I referred all cases to them, expecting to be known by them, but they are not good to me...The HEW does not want to communicate with me, but I continue to attend the childbirth, [but] they don't allow me to meet with them through their daily work"* (SSI, TBA, Sidama).

Discussion

The main finding were remarkably similar in the study sites of both countries, despite significant geographical and cultural differences between Indonesia and Ethiopia. The cultural barriers to health facility-based childbirth which included religious beliefs, shyness and privacy related pregnancy, highly gendered decision-making as well as preference for TBAs were the highlights of factors common in both countries. Furthermore, the level of partnership between formal CTC providers and TBAs was also comparable in the study sites in both Indonesia and Ethiopia.

The dominance of the influencing factors in both countries differed. The issues of shyness and privacy related to pregnancy were more prominent in Ethiopia than in Indonesia. Whereas the preference for TBA was stronger in Indonesia, in-country differences between the two study sites were seen with higher preference for TBAs in Cianjur than in Southwest Sumba.

The findings in Indonesia were in line with previous studies in the country, despite the inclusion of Southwest Sumba, a site not included in previous studies (Belton et al, 2014; Ambaretnani, 2012; Titaley et al, 2010). Likewise, the findings in Ethiopia supported previous studies from the country (Mesfin et al, 2004; Shiferaw et al, 2013; Worku et al, 2013) and other countries in sub-Saharan Africa (Ackers et al, 2018; Kyei-Nimakoh et al, 2017). Our findings add to the literature by demonstrating the collaborative approach between the different CTC maternal health providers within Indonesia and Ethiopia, who took a pragmatic and problem-solving approach to increase health facility-based childbirth whilst adhering to cultural and traditional norms and responding to related beliefs.

The existing preference for TBA care among many study participants and the high regard for them in the community were strong factors influencing home-based childbirth particularly in Indonesia and to a lesser extent in Ethiopia. In Indonesia, TBAs were perceived as valuable both for the physical services such as massages that they give during pregnancy and their adherence to traditional practices. The proximity of TBAs to the village homes, and the limited availability of village midwives in their assigned villages also contributed to TBA care preference for giving birth and similar to what is stated in previous studies (Belton et al, 2014; Titaley et al, 2010). In Ethiopia, cultural norms dictating that women should give birth at home like their ancestors as well as a fear of being exposed to strangers created a preference for TBAs.

Our findings revealed the crucial role of TBAs among populations in the study sites and indicated the importance of maintaining and increasing collaboration between formal CTC providers and TBAs. Several village midwives in the study sites in Indonesia as well as HEWs in the study sites in Ethiopia reported good collaboration with TBAs, though this collaboration was not without challenges. In several cases, the collaboration between formal CTC health providers with TBAs created tensions as some TBAs felt undermined and unsupported by the village midwives (Indonesia) or HEWs (Ethiopia).

Recommendations

Our findings suggested the need for more inclusive health promotion programs for pregnant mothers and their families, including their husbands and elderly members of the family, on maternal health issues and the benefits of giving birth in the health facility (Belton et al, 2014; Coxon et al, 2014; Mesfin et al, 2004; Shiferaw et al, 2013; Steege et al, 2018;Titaley et al, 2010; Worku et al, 2013).

Cultural norms related to Indonesian and Ethiopian women not being allowed to leave their home during pregnancy and an unwillingness to disclose pregnancies early as mentioned in Ethiopia limit women's ability to seek antenatal care, a finding which needs to be considered in health promotion. Fostering trust between formal CTC providers, TBAs and the community will be essential to help identifying pregnant women early in the pregnancy. Strengthening home-based antenatal care may be a way to respond to these cultural preferences and ensure care reaches pregnant women. Moreover, home visits may ensure that health promotion messages

around institutional childbirth reach women in their homes, together with family members who may be the primary decision-makers. Gender norms limit women's decision-making power in in the study sites in both Indonesia and Ethiopia. Therefore, health promotion should focus to provide them with knowledge in line with a gender transformative approach and equip women with skills in communication and negotiation to obtain support from their husbands and elder members of their family to give birth in a health facility.

We also recommend strengthening partnerships between formal CTC providers e.g. village midwives, *Posyandu kader* with TBAs in Indonesia, and between HEWs with TBAs in Ethiopia by encouraging a culture of trust between them, and a sense of working towards the same goal. This could help to alleviate any concerns that may lead to tensions between the different cadres. Maintaining and increasing collaboration among CTC health providers, particularly with a long rooted cultural agency such as TBAs, requires mutual trust among them and political support from the national and local government (Kane et al, 2016; Kok et al, 2015; Nasir et al, 2014). Additionally, increasing the responsiveness to traditional practices in health facilities may increase institutional childbirth, which in turn may improve maternal health in both countries. Engaging and working with cultural and religious leaders in the community would be worthwhile to ensure greater adherence to traditional practices in health facilities and gain trust of the community.

Study limitations

Since this is a qualitative study conducted in few selected study sites, we should be cautious to generalise our findings to the wider populations in both countries. However, the main findings were comparable to previous studies in Indonesia and Ethiopia and it contributed to greater understanding of the cultural barriers to health facility-based childbirth in the study sites in both countries. Moreover, social desirability bias i.e. the tendency of some participants to state an answer in a way they consider to be more *socially* acceptable could have played a role, although study teams observed that study participants generally felt free to express their views.

Conclusion

Our study demonstrated that the cultural challenges which prevented women from giving birth at health facilities were comparable in Indonesia and Ethiopia, despite distinct country wise cultural

and geographical differences. Collaborative approaches including working with TBAs and religious and cultural leaders as well as local governments will be required to encourage uptake of health facility-based childbirth in both countries. An approach that fosters trust between pregnant mothers within communities, TBAs and other CTC maternal health providers such as HEWs in Ethiopia and village midwives or *Posyandu kader* in Indonesia could assist in improving maternal health in both countries. In addition, working to transform unsupportive gender norms that limit women's decision-making power over delivery will be crucial.

Competing interests

The authors declare they have no competing interests.

Acknowledgements

The study presented in this paper is part of the REACHOUT consortium. This programme has received funding from the European Union Seventh Framework Programme ([FP7/2007-2013] [FP7/2007-2011]) under grant agreement no. 306090.

We thank the informants who participated in the study and the study teams for the fieldwork and data collection in Indonesia and Ethiopia. In Indonesia, we appreciate the cooperation of the Heads of the Community Health Centres (*Puskesmas*) and midwife coordinators of the participating *Puskesmas.* We also acknowledge the support received from the Heads of Mother and Child Division of Ministry of Health of Republic of Indonesia and Southwest Sumba and Cianjur District Health Office. In Ethiopia, we would like to extend our appreciation to the Regional Health Bureau, Sidama Zone Health Department and the Woreda Health Offices for cooperation and support provided to carry out this research.

Additionally, we thank the Indonesian Ministry of Research/Technology and Higher Education who provided fund through Scheme for Mobility and Exchange (SAME) Fellowship that facilitated Dr. Sudirman Nasir to become a visiting scholar at Liverpool School of Tropical Medicine (October - December 2018) to work on drafting the manuscript.

References

Achadi, E, Scott, S, Pambudi, S, Makowiecka, K, Marshall, T, Adisasmita, A. 2007. "Midwifery Provision and Uptake of Maternity Care in Indonesia." *Tropical Medicine and International Health* 12 (3): 1490-14907.

Ackers, L, Webster,H, Mugahi, R, Namiiro, R. 2018."What price a welcome? Understanding structure agency in the delivery of respectful midwifery care in Uganda." *International Journal of Health Governance,* 23(1), 46-59

Addisalem, F, Meaza, D. 2012. "Prevalence of Institutional Delivery and Associated Factors in Dodota Woreda (district), Oromia Regional State, Ethiopia." *Reproductive Health* 17 (2):9-33.

Ambaretnani, P. 2012. "*Paraji and Bidan in Rancaekek: Integrated Medicine for Advanced Partnerships among Traditional Birth Attendants and Community Midwives in the Sunda Region of West Java, Indonesia* [dissertation]." Leiden: Universiteit Leiden.

Asmelash, B. 2000. "Decentralisation as a Tool for Resolving the Nationality Problem: The Ethiopian Experience." *Regional Development Dialogue* 21 (2): 122-147.

Belton, S. Myers, B, Ngana, F. 2014. "Maternal Deaths in Eastern Indonesia: 20 Years and Still Walking: An Ethnographic Study." *BMC Pregnancy and Childbirth* 9: **14-**39.

Bohren, A, Hunter, C, Munthe-Kaas, M, Souza, J, Vogel J, Gülmezoglu. A. 2014. "Facilitators and Barriers to Facility-based Delivery in Low- and Middle-income Countries: A qualitative evidence synthesis." *Reproductive Health* 11: 71-88.

D'Ambruoso, L. 2012. "Relating the Construction and Maintenance of Maternal Ill-health in Rural Indonesia." *Global Health Action* 5 (3): 77-81.

Cianjur Bureau of Statistics. 2016. "Cianjur dalam Angka" (Cianjur in Numbers). West JavaProvince, Indonesia.

Corbin, J, Strauss, A. 2015. "*Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory."* (4th edn) SAGE Publications.

Coxon, K, Sandall, J, Fulop, J. 2014. "To What Extent are Women Free to Choose Where to Give Birth? How Discourses of Risk, Blame and Responsibility Influence Birth Place Decisions." *Health, Risk and Society* 16 (11): 51-67.

Green, J,Thorogood, N.2013." *Qualitative Methods for Health Research*." (3rd edn) SAGE Publications Ltd.

Fetene, N, Linnader, E, Fekadu, B, Alemu, H, Omer, H, Canavan, M, Smith, J, Berman, P, Bradley, E. 2016. "The Ethiopian Health Extension Program and Variation in Health System Performance: What Matters." *Plos One* 26: 1-19.

Hagmann, T. 2005. "Challenges of Decentralisation in Ethiopia's Somali Region" *Review of African Political Economy* 32 (10): 449-455.

Gilson, L. 2007. "*Acceptability, Trust and Equity. In: The Economics of Health Equity*." Cambridge: Cambridge University Press.

Heywood, P, Choi, Y. 2010. "Health System Performance at the District Levelin Indonesia after Decentralisation." *BMC International Health and Human Rights* 10 (3): 1-12.

Kane, S, Kok, M, Ormel, H, Nasir, S, Sidat, M, Taegtmeyer, M, Theobald, S, de Koning, K. 2016. "Limits and Opportunities to Community Health Worker Empowerment: A Multi-country Comparative Study." *Social Science and Medicine* 164: 27-34.

Kea, A.Z, Admassu, M, Datiko, D.G. 2014. *"Report on the Context of Close-to-Community Health Providers in Ethiopia."* REACHOUT Programme.

Kea, A.Z., Tulloch, O, Datiko, D.G, Theobald, S, Kok, M. 2018. "Exploring Barriers to the use of Formal Maternal Health Services and Priority Areas for Action in Sidama Zone in Southern Ethiopia." *BMC Pregnancy and Childbirth* 11(2): 18-96.

Kok, M, de Koning, K, Ormel, H, Kane, S. 2014. "International Literature Review on Close-to-Community Providers: An Analysis of Systematic Reviews on Effectiveness and a Synthesis of Studies Including Factors Influencing Performance of CTC Providers." REACHOUT Programme.

Kok, M, Kea, A.Z, Datiko, D.G, Broerse, J, Dieleman, M, Taegtmeyer, M, Tulloch, O. 2015. "A Qualitative Assessment of Health Extension Workers' Relationships with the Community and Health Sector in Ethiopia: Opportunities for Enhancing Maternal Health Performance." *Human Resources for Health* 74 (3): 3-80.

Kyei-Nimakoh, M, Carolan-Olah, M, McCann, T.V. 2017. "Access barriers to obstetric care at health facilities in sub-Saharan Africa—a systematic review." *Systematic Review* 6, 110-12

Limato, R, Ahmed, R, Magdalena, A, Nasir, S, Kotvojs, R. 2017. "Use of Most Significant Change (MSC) Technique to Evaluate Health Promotion Training of Maternal Community Health Workers in Cianjur District, Indonesia." *Evaluation and Planning Program* 66 (3): 102-110.

McCollum, R, Limato, R, Otiso, L, Theobald, S, Taegtmeyer, M. 2018. "Health System Governance Following Devolution: Comparing Experiences of Decentralisation in Kenya and Indonesia." *BMC Global Health* 35 (3): 1-11.

Mesfin, N., Damene, H, Getnet, M. 2004. "Assessment of Safe Delivery Service Utilization among Women of Child Bearing Age in North Gondor Zone, North West Ethiopia." *Ethiopian Journal of Health Development* 18 (3):145-152.

Nasir, S, Ahmed, R, Miladi, K, Limato, R, Tulloch, O, de Koning, K, Syafruddin, D. 2014. "Context Analysis of the Performance of Close-to-Community Maternal Health Providers in the Districts of Southwest Sumba and Cianjur, Indonesia." REACHOUT Programme.

Nasir, S, Ahmed, R, Kurniasari, M, Limato, R, Tulloch, O, Syafruddin, D, Koning, K. 2016."Challenges that Hinder Parturients to Deliver in Health Facilities: A Qualitative Analysis in Two Districts of Indonesia." *Makara Journal of Health Research* 20 (3): 77-87.

Nordholt, H.S. 2005. "Decentralisation in Indonesia: Less State, More Democracy." *Politicising Democracy* 25: 29-50

O'Connell, T.S, Bedford, K.J.A, Thiede, M, McIntyre D. 2015. "Synthesising Qualitative and Quantitative Evidence on Non-financial Access Barriers: Implications for Assessment at the District Level." *International Journal of Equity Health* 45 (3): 14-54.

Shiferaw, S, Spigt, M, Godefrooij, M, Melkamu, Y, Tekie, M. 2013. "Why Do Women Prefer Home Births in Ethiopia?." *BMC Pregnancy and Childbirth* 31 (2): 13-25.

Steege R, Taegtmeyer M, McCollum R, Hawkins K, Ormel H, Kok M.C, Rashid, S, Otiso, L, Sidat M, Chikaphupha, K, Datiko, D.M, Ahmed, R, Tolhurst, R, Gomez, W, Theobald, S.J. 2018. "How Do Gender Relations Affect Lives of the Close-to-Community Health Service Providers: Empirical Research, A Review and Conceptual Framework". *Social Science and Medicine* 209: 1-13.

Southwest Sumba Bureau of Statistics. 2016. "Sumba Barat Daya dalam Angka" (South West Sumba in Numbers). East Nusatenggara Province, Indonesia.

Titaley, C.R, Hunter, C.L, Dibley, M.J, Heywood, P. 2010. "Why Do Some Women Still Prefer Traditional Birth Attendants and Home Delivery?: A Qualitative Study on Delivery Care Services in West Java Province, Indonesia." *BMC Pregnancy Childbirth* 10 (3): 43–53.

Tumbelaka P, Limato R, Nasir S, Syafruddin D, Ormel H, Ahmed R. 2018. "Analysis of Indonesia's Community Health Volunteers (*Kader*) as Maternal Health Promoters in the Community Integrated Health Service (*Posyandu*) Following Health Promotion

Training." *International Journal of Community Medicine and Public Health* 5 (3): 127-135.

UNICEF. 2016a. "Maternal and Newborn Health Disparities in Indonesia". https://data.unicef.org/wpcontent/uploads/country_profiles/Indonesia/country%20profile_IDN.pdf

UNICEF. 2016b. "Maternal and Newborn Health Disparities in Ethiopia".https://data.unicef.org/wpcontent/uploads/country_profiles/Ethiopia/country%20profile_ETH.pdf

WHO, UNICEF, UNFPA, World Bank, UN, 2015. *"Trends in Maternal Mortality 1990-2015"*.https://www.who.int/reproductivehealth/publications/monitoring/maternalmortality-2015/en/

Worku, A, Jemal, M., Gedefaw, A. 2013. "Institutional Delivery Service Utilisation in Woldia, Ethiopia." *Science Journal of Public Health* 1 (1): 18-23.

Yassin, M.A, Datiko, D.G, Tulloch, O.H, Markos, P, Aschalew, M, Shargie, E.B, Dangisso, M.H, Komatsu, R, Sahu, S, Blok, L, Cuevas L.E, Theobald. S.J. 2013. "Innovative Community-Based Approaches Double Tuberculosis Case Notification and Improve Treatment Outcome in Southern Ethiopia." *Plos One* 8 (5): 1-8.