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Introduction

Globally, every year up to 300,000 girls and women die as a result of pregnancy and childbirth, with an additional 10 to 15 million more suffering incapacitating complications (Alkema et al., 2015). In Timor-Leste the maternal mortality ratio (MMR) is one of the highest in South East Asia at 426 deaths per 100,000 live births per year (UNFPA, 2018; The World Bank Group, 2017). The use of a skilled birth attendant (SBA), during pregnancy and childbirth is a proven strategy to reduce the global MMR (WHO, 2004).¹ Currently just over half (56%) of Timorese women are birthing with a SBA and 48% of these births occur in a healthcare facility (General Directorate of Statistics (GDS), Ministry of Health and ICF, 2018). However, in many regional and remote districts in Timor-Leste only 15-25% of women birth with SBA (GDS, 2018). Childbirth with a SBA and the reduction of the MMR has been a major policy priority for the government of Timor Leste (DRTL, 2011b). The aim of this article is to explore the factors contributing to women's relatively low rates of uptake of SBA in Timor-Leste.

The Timorese Ministry of Health (MoH) works with international and national non-governmental organisations (NGOs) as development partners to provide maternity health care and other public health services in Timor-Leste (DFAT, 2011; Mercer et al., 2014). Consequently, since independence in 2002, the Timor-Leste government has claimed a reduction in MMR and infant and child mortality and an increase in women birthing with SBA (GSD, 2018). However, there are numerous challenges; for example, many government health service do not have basic WASH facilities, such as water, sanitation and waste management (Inder et al., 2014; Quintão, 2018). There is also a lack of medical supplies, equipment and drugs to provide basic services (Smitz et al., 2016; Price et al., 2016; Zwi et al., 2009; 2015). In addition, many SBA are untrained to give emergency obstetric care

¹ The most appropriate SBA for a woman experiencing a normal pregnancy and birth is the professional midwife, (Horton & Astudillo, 2014), however, a doctor or nurse trained in midwifery skills are also engaged as SBA (WHO, 2004).

(EmONC) and have limited resources to provide this care in Timor-Leste. This contributes to poor maternal health outcomes (MoH, 2016; Zwi et al., 2015). There are also shortages of midwives and limited opportunities for ongoing professional development of health professionals (Asante et al., 2011; Buchan & Weller, 2012; Dawson et al., 2011). These conditions clearly impact upon health workers' ability to provide care.

The contexts of Timor-Leste include a long history of colonisation, conflict and profound social and economic underdevelopment (Molnar, 2010; Nicole, 2002). In addition, many Timorese are poor and have little formal education and rely upon long standing cultural knowledge and traditions. These are prevalent during pregnancy and childbirth. Timorese women need their husband's permission to access family planning and there is a relatively low level of uptake of this service (24%) (GSD, 2018). The majority of Timorese women continue to birth at home, many of these use support from their family or the traditional birth attendant (TBA) (GDS, 2018).

Until now, there has not been any research published which specifically addresses the broad contextual factors which affect women's engagement with maternity services in Timor-Leste. This research explored the barriers and enablers to women's use of maternity services in three districts in Timor-Leste. The key research questions were:

To examine current national policy approaches and how they are enacted in Timor Leste from the point of view of key stakeholders;

To explore the proximate circumstances surrounding choice and decision-making about care by mothers and their families during pregnancy and childbirth;

To identify women's expectation and experiences for care during pregnancy and childbirth.

Methodology

The researcher is an Australian midwife academic who has a long standing interest in women's reproductive health and maternity care in developing countries. This research was conducted as part of a larger doctoral project. The methodology encompassed a qualitative descriptive design using focused ethnography. Data was collected from two sample groups during two field trips to Timor-Leste (January to June, 2017). These groups were 30 women over the age of 18 years, who had children and who were competent to give consent. Another 17 stakeholders participated as key informants, these were engaged in the provision of maternity care in Timor-Leste, including midwives, doctors and managers. Ethics approval was gained in December, 2016 from two Human Research Ethics Committees (HRECs), Federation University HREC reference number A16-163, and the Timor-Leste's, Ministry of Health, Institutu Nasional de Saude (INS) HREC committee reference number MS-INS/GDE/DP-EA/XII/2016/.

The researcher, established informal in-country links with the ALOLA Foundation's, Mother Support Groups and these groups were used to make contact community women in Viqueque and Ainaro districts. In Dili, the community women were contacted through the researcher's professional networks. The women were recruited using the snowball sampling technique (Patton, 2015). Stakeholders were recruited using a convenience sampling technique (Grbich, 2013). The researcher contacted the women and stakeholders by email or in person asking if they were interested in participating in the study. Data collection was conducted in three districts in Timor-Leste. These three districts were selected because they were representative of Timor Leste overall; they included the capital district of Dili, an urban district with high density population in addition to two remote regional districts, these were Viqueque and Ainaro. This data collection was congruent with qualitative research; namely semi-structured interviews, focus groups, field notes and participant observation (Denzin & Lincoln, 2008a; Madison, 2012). Where participants

consented the semi structured interviews were audio recorded. Data collection ceased once there was data saturation.

The lead researcher does not speak tetun and interpreters were used for the focus groups, participant observation and half the semi structured interviews. The other half of the interviews were conducted in English and did not require translation. The semi structured interview questions for this study were designed to elicit the knowledge and experience of women and stakeholders in relation to women's use and expectations of health services during pregnancy and childbirth. Interview questions were developed from the literature review, with particular reference to the research question and objectives. A panel of four supervisors reviewed the questions for content and validity. These questions were revised and tightened at supervisory meetings to relate more closely to the research objectives. As discussed by Patton (2015), the questions addressed a range of fields such as personal experience, opinions, feelings and knowledge. Two separate interview guides were developed for use in interviews with the women and stakeholder groups.

Interpreters were used in data collection and translation of the audio recorded interviews and when following up on notes from the focus groups. The translators were not part of the initial research team and solely provided the translation. The researcher rechecked meaning with the translators after each response to questions during the individual semi-structured interviews and focus groups. Later, when the researcher and translator were transcribing the recorded transcripts the researcher checked and interrogated meanings as they progressed through the transcripts. This meant that the lead researcher worked with Timorese translators who could both interpret and support the research process, acting at this time as both a research tool and research assistant (Caretta, 2015).

Data Analysis

The data from semi structured interviews and focus groups was initially discussed and clarified between the author and research assistant/interpreter concurrently during data collection and translation (Grbich, 2013). Upon completion of data collection, the author worked with her supervisory team to conduct a more in depth thematic analysis to identify code and categorise the primary patterns of the data (Madison, 2012). The smallest segments of meaning were highlighted and coded and the codes were reread many times, then beginning to group like segments into preliminary groups or sub-groups which were then mapped to broader conceptual themes or typology (Grbich, 2013; Loftland et al., 2006).

Rigor, reliability and validity was ensured through a strong literature review identifying what was known and where the gaps in the literature lay. The research topic and aims were developed using appropriate methods and research design (Richards & Morse, 2013). The research design and the research question was tested and strengthened in Confirmation of Candidature and HREC ethics application processes. A team of supervisors supported the development of semi structured interview questions and a pilot interview was conducted with one participant from each group. No amendments were made to the interview questions. Semi-structured interviews were audio recorded with the participant's consent. Interviews continued until there was saturation of the data. Data was member checked with participants during the interview process (Denzin & Lincoln, 2018c). The two sources of data from women and stakeholders, in addition to the multiple data collection techniques provided opportunities for triangulation of the data (Denzin & Lincoln, 2008b; Flick, 2018).

The modified AAAQ Framework

In previous research evaluating the provision of healthcare in low and middle income countries the AAAQ framework has been used to evaluate healthcare services. The framework uses interrelated categories of **Access, Availability, Acceptability and Quality** Office of the High Commission of Human Rights [OHCHR], 2000). The category of **Access** is related to their universal physical, informational and economical accessibility. **Availability** of services focuses upon the provision of functional well-resourced public health and healthcare facilities with necessary underlying infrastructure, for example, potable water, sanitation, human and medical resources. **Acceptable** services entail the provision of respectful and culturally appropriate care. **Quality** services must comply with international standards of accreditation, regulation, monitoring and evaluation (OHCHR, 2000; Homer et al., 2018). Following the analysis of the data the AAAQ framework is modified to include the category of **Antecedents** in order to incorporate data which reflects upon the political, socioeconomic and cultural conditions impacting upon women's and family decision-making in Timor-Leste.

Findings

The key findings from the study include brief extracts of the interview and focus group data. The participants are represented as stakeholders (SH) or community participants (CP) from Dili (D), Vequeque (V) or Ainaro (A) districts. Focus groups are designated as FG. The data in this section is structured using the AAAQA framework outlined in the previous section.

Access to services

The absence and poor condition of roads, lack of transport and widespread poverty all contributed to women's reduced access to a SBA. Women and their families experience difficulties travelling to health facilities:

Long distance, raining and difficult to cross (the) river, they cross the river at Mau Nuno...(For) the women living on the farms it is difficult to come to the hospital, up to four or five hours walking. ASH3

Travel at night, in wet weather on mountain pathways is dangerous and problematic.

There are also costs associated with using services, these include:

What are the costs of birthing at the clinic? Costs of transportation, baby clothes, baby oil, some clothes for the mother, whatever is the condition of the fashion. VCP2

Participants also noted that often the women had other domestic or agricultural responsibilities which restricted their options in terms of traveling to services.

The reason you don't go to hospital, no one to look after the children at home. AFG.

Availability of SBA services

The Ministry of Health (MoH) policy uses health promotion in clinics and community outreach to drive change and encourage demand for a SBA. However, despite the Ministry promoting demand for SBAs there was a problem with the availability of SBA staff. This meant then that:

So the challenge for the community is no access to a midwife, no health professional that can give them good care especially at health post and health centre level. DSH3

Both the women and stakeholders noted that the ambulance and sometimes other NGO vehicles are important facilitators to women's access to SBA services. However, these ambulances were not always available or operational.

They have ambulance, fuel and human resources. They are running out of fuel...The community call for the ambulance and there is no fuel. DSH2

The stakeholders were frustrated about the lack of equipment such as thermometer, scale, sphygmomanometers, drugs and other medical supplies which obviously impacted upon their capacity to provide services. They said:

How to reduce the mortality of the women? We want to have more equipment and health posts. We need more human resources, equipment and transportation. ASH3

Another important issue cited by stakeholders was the limited opening hours at community health clinics and the number of closed health posts.

There is also a lack of supervision of clinic. You see in some facility (open) from 8 am to lunchtime and closed in the afternoon...so the government do not control this sort of thing. If they control this we can see that the community can get better service. DSH2

Clearly limited opening hours at community health clinics (CHC) reduced the women's access to SBA and also decreased their confidence in the availability of health services.

When the lady in Lorro, she goes to the hospital and they say there is a notice...parteira (midwife) at a meeting. But there is no meeting, it is just closed. When the women come in labour and come to hospital there is no one there. DSH5

In addition, many smaller and more remote Health Posts were closed because of the lack of infrastructure, resources and staff.

Acceptability of SBA services

Even if women are able to engage with skilled birth attendants or other health care providers, these services may be unsatisfactory for the woman or her family. The results from this study demonstrate that many women were dissatisfied with the capacity of service providers to respond to the specific cultural needs of the women (Homer et al., 2018; OHCHR, 2000; UNFPA, 2017). This research highlights the lack of privacy available to women at health services. The lack of privacy affected the women's experience of care in terms of their comfortability, confidence in the service provider and trust in the confidentiality of the service. The women commented:

The maternity ward should close door or (only allow) those who entitled to assist the pregnant woman. (They) should only be doctor and midwife. Not everyone can enter the room. VCP1

Another issue identified was the number of people providing a particular sequence of care to the women. Often, it appeared there were multiple healthcare providers attending to the women at one time. A number of women commented upon their preferences:

Her recommendation is that one midwife should attend to the woman when she is in labour. If more than one midwife then they are shy. (This) makes them shy because the people (are) watching and walking about the room. VCP4

Multiple caregivers meant the women were not able to develop a relationship with one midwife. They said:

A number of midwives reduces the privacy for the women. If just one this makes it private. But if there are a number of midwives, they (will) be talking between each other and this is not private. There is no confidence. Woman to one midwife makes it private and gives her confidence. ACP4

The lack of privacy and multiple caregiving meant that women were birthing in a strange place, amongst relative strangers. During fieldwork it was noted that there were no sheets or covers on the beds, nor screens around the bed or benches in the health facilities. The women may have no privacy or control over the number of people who come and go in the birthing area. This resulted in women commenting that:

In some part they said they don't agree to go to hospital because they feel shy because sometimes the midwives do not give them good assistance. Sometimes they sleep naked and nobody care for them and many people come in and out. This reduce their motivation to go to the clinic. VCP4

Services were also less acceptable because of the lack of basic infrastructure noted earlier. This meant that:

The women don't want to come to the clinic because there is no water, no power, how can you be clean if there is no water? DSH2

Quality of services

A number of stakeholders were also concerned about the lack of medical and skilled human resources. For example:

But I think the main thing is quality we need to focus on quality, if the service is not there, we need to put it there. We have the maternal health policy but there is no quality. DSH1

Some stakeholders identified the lack of policy action from the MoH as a key problem that contributed to the poor quality of services. One outstanding issue was the educational preparation of SBA staff.

The doctors and midwives that are coming out of pre-service training are not prepared for clinical practice. DSH6

There were also deficits noted in the skills of other international medical staff providing services. A number of stakeholders said:

We have doctor everywhere, with no training. They have the doctors come from Cuba. They do not know how to have skills to deliver the baby. They do not have those skills. DSH2

This issue was compounded by the lack of mentoring of newly graduated staff and the limited opportunities for ongoing professional development and training. One key deficit in skills and resources is noted here:

In terms of equipment and supply, they lack a basic emergency obstetric and neonatal care facility. The main skills lacking include newborn resuscitation, assisted instrumental birth and manual removal of placenta. But also many are afraid to give drugs including magnesium sulphate and antibiotics. DSH6

The lack of SBA competency and skill development translated into the care the women received at health facilities. This stakeholder claimed:

Women having high blood pressures recorded on their card, but no action is taken. Prolonged ruptured membranes, no action taken. Women arrive with premature ruptured membranes, transverse lie and dead babies. They arrive too late! Midwives and doctors are not acting on the information that is in front of them. They are not managing the risk. DSH1

One of the issues contributing to poor quality care was the lack of regulatory frameworks governing professional practice. In this case:

There is no monitoring or evaluation of the midwives, no supervision of them or their skills. We need to regulate and evaluate the competence of all midwives. There is a lack of regulation. DSH10

Regulatory frameworks would also ensure appropriate distribution and management of staff and standards set for accountable and safe professional practice (Koblinski et al., 2016; Kruk et al., 2017).

The Antecedents in Timor-Leste

The research identifies the unique contexts of Timor Leste, which include the ongoing influence of traditional beliefs and practices during pregnancy and childbirth. The findings from this research identified that whilst a number of stakeholders acknowledged the barriers to access to health services and SBA, many stakeholders also blamed the family's adherence to the traditions for the low uptake of SBA services. As a consequence:

The midwife say, don't use the traditional system, this is bad, don't use this. ASH2

There were a variety of issues cited by stakeholders. Timor Leste is predominately a patriarchal society where intergenerational decision-making is a central component of Timorese family dynamics. The majority of participants agreed about who made the important family decisions:

Men mostly make a decision. What happens in the house, how many kids to have? Mostly men make the decision. DCP4

It was not only the women's husband who were decision makers, this may depend upon living arrangement, but in many cases:

Because if you stay at your husband's family, you have to follow... You have to listen to your mother in law, because they have the experience. You have to follow, so the mother in law will say this is good and you just follow. DCP2

As a result:

Even though women are educated the family still makes the decision. It is not the pregnant woman, but her family that makes the decision. DSH1

The men and elder's authority in decision-making included decisions about place of birth. In Timor Leste, the National Health Strategy, 2004-2015 supports the policy that women birth with a SBA at a clinic/hospital (DRTL, 2005). It was demonstrated in the data, however, that this was not straightforward in practice. Some women acknowledged the husband's authority in the final decision about place of birth. In other words:

Some women, the husband wants them to just deliver baby at home. VD1

It was evident that women do rely on the opinions of their family and husbands. In another instance:

My mum is very traditional, so she never go to hospital... And she does not encourage me to go to the hospital. I decide to believe in my mother and deliver the baby at home. DCP4

However, the men are not always the only decision-makers in the family. A number of women reported a different experience. For example:

In my family it is my mum who makes the decision. Because she is strong, she has the confidence to make a decision and my father will support her. DCP3

The men are also influential in decision-making about women's access to family planning. For instance:

If the husband says you can go for family planning, then you can go. If the husband says no then you don't. ACP1

In addition, the data from this research suggested that family planning services are not easily accessed by unmarried women. Stakeholders also noted that the issues were that:

Yes, there are a lot of young couples who are sexually active, I think they just don't know where to go for contraceptive advice or they probably feel that they will be judged. We also have a high rate of incomplete abortions, which indicates there is a high rate of unmet need for family planning

DSH1

Midwives can act as gatekeepers to woman's access to family planning services, even when working with married women (UNFPA, 2017). In Timor-Leste, women must confirm they have their husband's permission to access family planning services and midwives may refuse to provide these services. During participant observation in a clinic in Dili, the researcher witnessed midwives refusing family planning services to a woman who had experienced 14 previous pregnancies with eight living children, the youngest, three months old in her arms. The midwives refused the service because the woman's husband was not present to verify his consent to her access to family planning (Field notes, Dili).

Discussion

The findings from this research have demonstrated the multiple structural deterrents to women's use of SBA in Timor-Leste. It is clear that during pregnancy and childbirth women and their families must negotiate a range of challenges in order to engage with SBA services. These findings increase our comprehension of the barriers to women's access by identifying and integrating these intersecting layers of adversity; thereby highlighting how they interact, compound and perpetuate the difficulties of access and use of SBA services. In addition, the AAAQ framework is modified to include the addition of the category of the Antecedents in recognition of the unique cultural, political and socio economic

circumstances which contribute additional layers of complexity to family decision-making in Timor-Leste.

The lack of Access to health care facilities are reiterated in a number of previous reports from Timor-Leste (Price et al., 2016; Wallace et al., 2018; Zwi et al., 2009). These are particularly relevant in regional areas where 70% of people are living (NDS, 2010). Recent census data indicates that the percentage of women birthing with SBA in regional and remote districts varies from 15 to 45% (GDS, 2018). The important role of the ambulance in enabling women's access to SBA is supported by other previous reports (Price et al., 2016; Zwi et al., 2015).

One innovative program in Myanmar, the MOM Project (Mullany et al., 2010), has focused upon increasing the skills and mobility of maternal health workers. This program has dramatically improved women's access to health workers and pregnancy outcomes for these women (Mullany et al., 2010). It is suggested that the MOM Project might serve as a model approach for delivering maternal health care in other severely resource constrained areas (Mullany et al., 2010). Until the government of Timor-Leste can facilitate improved access to SBA, midwives and other SBA can use designated motor bikes to travel and support women birthing in communities or in a nearby health posts. This strategy may improve women's access and use of SBA in Timor-Leste.

A lack of Availability of services includes the shortage of medical and human resources and is noted in previous reports from Timor-Leste (Asante et al., 2014; Khanal et al., 2014; MoH, 2016; Price et al., 2016). This points towards an ongoing issue for the government. Early closure of clinics is also noted in previous research conducted by Price et al, (2016) and Asante et al, (2011). The early closure of clinics appeared to be a practice that is outside standard guidelines and expectations and would indicate a need for the political will and/or resources to enact a comprehensive regulatory framework. Such a

framework would monitor and enforce protocols for staff attendance at clinics and health posts. Early closure of clinics clearly reduces women's access to SBA services.

The Acceptability of services is determined by the provision of services which meet the social and cultural needs of the women (Homer et al., 2018; OHCHR, 2000). Both stakeholders and women identified the need for SBA to provide care that is culturally congruent and it is evident from the data that in many cases this type of care is not provided to the women. The general lack of privacy and other culturally congruent care provided to women in the health care facilities in Timor Leste is a barrier to women's access. This issue is recognised in previous research in Timor-Leste (HAI, 2015; Wallace et al., 2018; Wild, 2009; Zwi et al., 2015). In addition, there are other international studies which similarly identify the lack of privacy as a relatively widespread problem for women accessing SBA services in many low and middle income countries (Rosen et al., 2015; Srivastava et al., 2015). This literature identifies that the lack of privacy embarrasses women, contributes to their perceptions of poor quality care and discourages them from attending health facilities (Bohren et al., 2015; Bohren et al., 2014; Tuncalp et al., 2015).

Policy changes from the MoH could encourage the provision of culturally sensitive maternity care, including the provision of greater privacy and relationship with midwives when only one midwife is providing the bulk of the sequence of care. This is as opposed to fragmented piecemeal care provided by multiple caregivers. A Cochrane review of midwifery led models of continuity of care noted that these models lead to a higher rate of spontaneous vaginal births, less epidural anaesthesia, fewer episiotomies and instrumental births, with less pre term births and less perinatal infant death (Sandal et al., 2016). This research indicates that continuity of midwifery care promotes women's capacity for normal labour and decreases women's need for higher level medical interventions.

Poor Quality of health services, including lack of educational preparation, ongoing professional development and medical resources are all issues noted in previous reports from Timor-Leste (Zwi et al., 2009; Asante et al., 2011; Price et al., 2016). More broadly, poor quality maternity care is another common problem in low and middle-income countries (Campbell et al., 2016; Homer et al., 2018; Tuncalp et al., 2015). In these countries, health services may be unhygienic and culturally unsafe facilities, lacking resources and staffed by low skilled SBA who communicate poorly with women and their families. Globally, these issues all contribute to women's lack of satisfaction and reduced demand for SBA services (Afulana, 2015; Akachi & Kruk, 2017; Bohen et al., 2015; Tuncalp et al., 2015; WHO, 2015a).

When general infrastructure and health services are strengthened this can facilitate women's Access, and a greater Availability, Acceptability and Quality of services (Bohen et al., 2015; Tuncalp et al., 2015). Currently in Timor Leste, it appears there is a lack of maternal health care policy with strong governance and regulatory frameworks. In addition, there is very limited allocation of budgetary resources dedicated to the health care system, including maternal health. In the 2017 State Budget, the Timor-Leste government reduced the money allocated to maternal health from 395,700 USD to 117,000 USD (UN Women, 2016). In addition, socioeconomically disadvantaged women's uptake of SBA services may be improved with the provision of inducements offered to the mother, such as vouchers or postnatal packs. These have demonstrated potential to improve uptake of SBA in other countries (Hunter & Murray, 2017; Kingkaew et al., 2016).

The Antecedents refer to Timor-Leste's broader structural and resource deficits in addition to the many traditions and practices associated with childbirth. Stakeholders tended to emphasise the harmful effects of the traditions and focused on providing information that counteracted them. Some of the issues included the Timorese patriarchal family structure whereby men and the elders are the acknowledged decision makers and have authority to

make decisions on behalf of the women. In many Timorese families, the senior more authoritative family members can and do make decisions which may be counter to the women's needs and desires. However, there were instances in this research where women indicated they also shared decision making powers, but this was not commonplace. It is clear from the data that in many circumstances men and elders are the ones who are making decisions about the place of birth. In many families there is a preference for a birth at home with support from family and/or the TBA. This means the woman does not have access to a SBA. The issue is also identified in other research recently conducted in Timor-Leste (Wallace et al., 2018). Cultural practices and women's perceived lack of social power can impact upon choices of SBA care in other low and middle income countries (Kamblijambi, 2015; Tesfaye et al., 2019).

Women's reduced access to family planning information and services is another important manifestation from Timor-Leste's unique cultural contexts. Timorese law and policy environment is supportive of reproductive health education (Cummins, 2017), however, widespread conservative family values and a church-government alliance restricts young Timorese access to sexual and reproductive health information and services including in school curriculum and health service provision (Cummins, 2017; Richards, 2017; 2010; UNFPA, 2017; Wallace et al., 2018; Wallace, 2014). This stance ignores the internationally recognised role of reproductive health education in reducing STIs, unwanted pregnancy and delaying sexual debut (Pappa et al., 2013; UNFPA, 2017). An additional compounding factor noted in previous research in Timor-Leste is the prevalence of family violence, affiliated with men's marital control of women, manifesting in women's reduced access to family planning (Meiksin et al, 2015).

Timorese cultural attitudes act to restrict women's access to reproductive health information and services. These attitudes are expressed through powerful structures of the Timorese patriarchal family and the Catholic Church which disapproves of modern family

planning methods (Richards, 2017). Midwives' and other staff in Timor-Leste also manifest these prohibitive attitudes. Staff working in family planning services in Timor Leste withhold information and family planning services from both young and married women, as witnessed by the researcher during participant observation at a government clinic in Dili. Previous reports from Timor-Leste also note that midwives can act as gatekeepers to woman's access to family planning services, even when working with married women (UNFPA, 2017). Where there is lack of access to information and family planning services women are vulnerable to teenage or unplanned pregnancy and also to the consequences of unsafe abortion (Belton et al., 2009; Cummins, 2017; UNFPA, 2017).

The current unavailability of information about sexual and reproductive health in Timor Leste contributes to gender inequity (Ginsburg & Rapp, 1991; Yamin, 2013), and contravenes basic human rights to reproductive and maternal health (Gruskin et al., 2010; WHO, 2015b; Yamin & Cantor, 2014). These circumstances in Timor Leste are reflected in a low uptake of family planning (24%), high rates of teenage pregnancy, the tenth highest fertility rate in the world and one of the highest maternal mortality rates in South East Asia (Cummins, 2017; GSD, 2018; UNFPA, 2018). Subsequently, Timorese women have a high risk of morbidity and mortality associated with pregnancy and childbirth (Alkema et al., 2015). International human rights law deem that states are accountable for their maternity and reproductive health care and should commit to women's survival of pregnancy and childbirth (Pillay, 2013; Yamin & Cantor, 2014).

Therefore, ideally, the government of Timor-Leste will prioritise strong national policy and investment into improving women's access to quality maternal health services. It is recognised more broadly that there is a need for more policy from low and middle income countries (Koblinski et al., 2016; Kruk et al., 2017). In addition, in many countries, a lack of quality midwifery education is compounded by weak or non-existent regulation of the profession, inadequate staffing and ineffective management of health services (Filby et al.,

2016; Homer et al., 2018). Midwives can be disempowered, lack professional status, poorly paid and poorly resourced (Brodie, 2013; Filby et al., 2016). Ideally the government of Timor-Leste will continue to increase the effectiveness of government spending and strengthen institutions to create an enabling environment for good health policy and regulation. Thereby ensuring that all Timorese women have equitable access to quality maternity care.

Limitations

The research was conducted in three districts of Timor-Leste and whilst there may be some commonalities in other districts of Timor Leste the findings cannot be crudely generalized to other countries. Another limitation is the small sample size of both the women and stakeholders in all three districts of Timor Leste. The lack of language and use of interpreters/translators was a barrier and did pose a limitation upon the study (Pitchforth, Van Teijlingen, 2005). The researcher has reflected that in the future, in any cross cultural research, it will be essential to include nationals as part of the research team. This will strengthen the integrity of the data.

Conclusion

The paper reports on recent research exploring the multiple contexts of women's engagement with SBA services in Timor-Leste. This research signals the prospect that Timor-Leste may not be progressing as well as hoped towards meeting the SDG's in particular around safe birthing, quality training and women's access to basic essential midwifery and medical resources. This data reports upon a comprehensive record of the barriers to women's access to SBA services. The original AAAQ framework provided four organisational domains, Access, Availability, Acceptability and Quality (AAAQ) of services (Homer et al., 2018), however the researcher has enhanced this framework with the addition of the category of Antecedents (AAAQA). The Antecedents are used to describe

the cultural, political and socioeconomic contexts of women's access to SBA services. The government of Timor-Leste faces a series of challenges stemming from a fundamental lack of infrastructure, widespread poverty, lack of education and pervasive cultural beliefs and practices which all contribute to the contexts of women's engagement with SBA during pregnancy and childbirth. Measures to alleviate poverty, regulation and governance of health professionals and health service delivery, further investment from both government and non-government agencies in general and health service infrastructure can all improve maternal health outcomes in Timor-Leste.

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