



FACTORS CAUSED FOR INTRA NATAL CARE AND POSTNATAL CARE AT HOME: QUALITATIVE STUDY ON THE LOCATION OF BIRTH

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ABSTRAK

The safe motherhood program aims to strengthen maternal health efforts at regional and national levels in the context of equality, poverty reduction, and human rights. However, maternal mortality remains a major challenge for health systems worldwide. Maternal morbidity and mortality rates in the Province of East Nusa Tenggara (NTT) are still a problem because of complications during pregnancy or childbirth and there are still births monitored and assisted by non-professionals at home. To increase and encourage the use of maternal health services, it is very important to understand the factors that influence maternal care-seeking behavior in NTT. This study was designed to explore societal values and practices surrounding labor and the postpartum period, the influence of these values and practices on health-seeking behavior, and the barriers and enabling factors to seek and utilizing maternal health services. We performed a rapid ethnographic assessment of maternal care-seeking behavior. It discusses local beliefs and practices related to childbirth and postpartum to determine the socio-cultural factors that contribute to the low absorption of maternal health services in NTT Province. This study seeks to identify and assess the factors that influence home delivery in Malacca District, NTT Province. This research is a qualitative research with an ethnographic approach. Data collection was carried out in April-August 2022 in Malacca Regency. Data were collected through in-depth interviews and FGDs with 30 informants, namely new mothers giving birth 0-3 months. Thematic analysis of interview data and FGDs. Of the 30 cases submitted, 16 cases decided to give birth at a health care facility, 12 cases gave birth at home, 2 cases gave birth on the way to a health facility. Five dominant themes affecting the location of delivery were identified: the perception of normal delivery; motivation to encourage the provision of health facilities; home delivery and postpartum practices; decision-making process; and the level of knowledge about the danger signs of labor and postpartum.

Kata kunci: child birth; health facilities; health service seeking behavior; maternal health; qualitative methods

INTRODUCTION

Maternal health is taking an increasingly prominent position on the international health scene. As emphasized by the recently published RH Action Plan by the World Bank, there is renewed global consensus on the need to make significant progress on sustainable development goals (Ministry of Health, 2021, WHO, 2014). International initiatives such as partnerships for maternal, newborn and child health. The safe motherhood program aims to strengthen maternal and newborn health efforts at global, regional and national levels in the context of equality, poverty reduction and human rights. However, maternal mortality remains a major challenge for health systems worldwide. Providing interventions to women when and where they need them should be a goal-oriented policy of all countries (Bedford et al., 2012).

The Province of East Nusa Tenggara (NTT) is one of the provinces that still has a high Maternal Mortality Rate (MMR) in Indonesia. The health care system is under-resourced, and services targeted at women are considered to have very low coverage (Kemenkes RI, 2021). Maternal mortality cases in NTT have decreased, from 158 cases (in 2018) to 148 cases (in 2019), but have increased again to 149 cases in 2020 (Ministry of Health RI., 2021; Provincial Health Office of NTT, 2021). Every year women die from complications during pregnancy or

childbirth in NTT and only 60.5% of births are assisted by trained personnel in health facilities, while the rest occur at home. This shows that the delivery coverage is still below the national target (87%) (Ministry of Health of the Republic of Indonesia, 2021).

Various interventions have been defined and implemented to increase MCH improvement through the utilization of maternal health services in NTT, but these efforts have not shown significant results. Along with the government's efforts and the MMR recorded in NTT Province is one of the provinces that has the highest number when compared to other provinces in Indonesia, the development of the NTT Province in the health sector is one of the ways to increase MCH services through the MCH Revolution strategy (East Nusa Tenggara Governor Regulation No. 42 of 2009). This program is the idea of the Head of the NTT Provincial Health Office. The MCH revolution aims to accelerate the reduction of maternal mortality and infant mortality with its motto is that all pregnant women give birth in adequate health care facilities. In addition to the MCH revolution program, there is the "2H2 center program" which is one of the ideas and designs of the Head of the East Flores District Health Office which is carried out by involving cross-sectoral "2H2 center program" which means 2 (two) days before the estimated delivery and delivery. two days after the mother gave birth). Despite such interventions, it is well documented that existing maternal and newborn health services continue to be underutilized by mothers in developing countries. Women who choose to give birth outside of a health care facility express different beliefs about risk and safety; home as a safe home.

These women have confidence in their bodies, their instincts and the birth process as normal life events (Hollander et al., 2017; Feeley et al., 2016). The desire for autonomy during pregnancy and birth and concerns about being disturbed during birth with unnecessary interruptions and interventions also trigger women's desire to give birth outside the system (Hollander et al., 2017; Oboyle, 2016). Previous traumatic birth experiences are another key driver (Oboyle, 2016; Rigg et al., 2017; Jackson et al., 2012).

The World Health Organization (WHO) has defined traditional birth attendants as people who assist mothers during childbirth and learn their skills through internships that include observation and are often highly respected by the community that chooses them to assist women in childbirth (WHO, 2014). Reviews and studies conducted in other developing countries (Miller et al., 2012) have reported the effectiveness of traditional birth attendants in improving maternal and newborn health outcomes. Training traditional birth attendants to manage common perinatal conditions significantly reduces neonatal mortality. Although the training of traditional birth attendants can provide them with basic midwifery skills, most traditional birth attendants do not have access to necessary clean delivery tools such as drug supplies and equipment for obstetric care, this can increase the risk of infection during delivery. In addition, traditional birth attendants do not have access to referral services to hospitals in case of complications during and after delivery (Gill et al., 2011 in Sialubanje et al., 2015). A government program through the Indonesian Ministry of Health that all women are recommended to use facility-based delivery services provided by trained and skilled health care staff (Kemenkes RI., 2016). However, many women in rural areas in Indonesia, including NTT, still give birth at home and traditional birth attendants are important providers of midwifery care, which is indicated by the achievement of coverage of deliveries in health care facilities only reaching 60.5 percent (Kemenkes RI., 2021).

There is a lack of evidence on the main reasons for home delivery and the use of traditional birth attendants. Currently, most of the published studies investigating the reasons for home

delivery in developing countries (Kawatsu et al., 2014), have focused on structural barriers to facility delivery services such as lack of geographic access to emergency obstetric care, and financial limitations. The factors that motivate women to give birth at home and the reasons for seeking help from traditional birth attendants have not been studied in depth. One qualitative study conducted in Zambia (Sialubanje et al., 2014), indicated that the perception of poor quality of maternal health services was due to negative staff attitudes towards pregnant women, shortage of qualified staff and lack of medicines and supplies needed to treat pregnant women, emergency obstetrics, care, social and cultural norms, women's low social status and lack of decision-making autonomy prevent women from utilizing facility-providing services in rural Zambia. In line with that, Titaley et al (2010) in Indonesia showed that the community has a positive attitude towards traditional birth attendants and considers their role to be very important in providing maternal health.

Women prefer traditional birth attendant services because they are available and accessible, affordable, and pragmatic. In addition, the community believes that traditional birth attendants have sufficient knowledge, midwifery skills, and can be trusted. Aggravated by these factors may differ from one socioeconomic, cultural and geographical context to another. However, so far, not many studies have investigated the factors that influence women's decisions to give birth at home in rural NTT, and the reasons for seeking the help of a traditional birth attendant have not been explored in depth. Therefore, the aim of this study was to gain a better insight into women's reasons for giving birth at home and their preference for traditional birth attendants. Knowledge of these factors is important for the design of public health interventions that focus on promoting childbirth in institutions and ultimately, improving maternal and newborn health outcomes in Indonesia in general and in NTT in particular.

METHOD

This research is a qualitative research with an ethnographic approach. Data collection was carried out in April-August 2022 in Malacca Regency. Data were collected through in-depth interviews and FGDs with 30 informants, namely new mothers giving birth 0-3 months. Thematic analysis of interview data and FGDs.

RESULTS

A total of 30 informants participated in this study. Of the 30 informants aged between 18-38 years. Half of the informants have between 3 and 5 children, 25% of them have 1 or 2 children, and 25% have 6 or more children. Half (50%) of the participants had between 6 or more children, 40% had between 3 and 5 children and 10% had 1 or 2 children. About half (48%) of informants have high school education, a quarter (25%) have junior high school education, 10% have high school education, 7% have never attended school and 10% have elementary school education. Half (50%) of the FGD respondents had an upper elementary school education, 20% had a junior high school education, 13.3% a senior high school education and 16.7% a higher education. The majority (75%) of FGD and IDI respondents (83.3%) were farmers. The majority (53%) of FGD respondents had given birth at home in a previous pregnancy, while 3 out of 4 mothers (75%) of IDI informants had given birth in a puskesmas/hospital.

Theme 1: perspective of home delivery and the use of traditional birth attendants

This theme focuses on the perspectives of in-depth interviews and FGD informants on childbirth/postpartum at home and the use of traditional birth attendants and their services. Overall, all of the informants were aware of the existence of traditional birth attendants in their community. One informant described it as follows:

“Dukun beranak is I have my own family/grandmother who lives with us. They are trained by midwives, I have a grandmother who has always helped people give birth (postpartum mothers who give birth at home)...they are mamas who are trained to help women from their village during childbirth and take care of their children” female relatives, FGD).

In addition, most of the participants had a positive attitude towards traditional birth attendants and their services. Informants who have a positive attitude towards birth attendants explain that birth attendants are very important and helpful because they accompany women during childbirth/postpartum in their village. In addition, traditional birth attendants have an important role in providing health education and antenatal care (ANC) services at designated health posts in the community. Then the birth attendant gave birth at the mother's house. Furthermore, the five village midwives explained that the community still believed in traditional birth attendants in rural areas. They revealed that in some traditional birth attendants they gave birth and postpartum care. There are some traditional birth attendants who are not trained. They get knowledge and skills passed down from their ancestors.

All participants were aware of the new policy that stopped the training of traditional birth attendants. They explained that the new policy also recommended that traditional birth attendants stop giving birth and that all women should give birth at a health center or hospital under the supervision of trained and skilled health staff such as midwives or doctors. In addition, the new policy stopped midwives at the health office/puskesmas from providing birth attendants with delivery packages and other assistance. With the policy change, traditional birth attendants are advised to work with the head of the puskesmas and/or the health office for safe maternal care/treatment, to encourage pregnant women to attend ANC services and give birth in health facilities. On the other hand, all FGDs and other informants with the exception of the birth attendants were of the opinion that many women in their village still gave birth at home, and the dukun still gave birth.

“Yes, the new rules are in place and many women know about them, said the nurse at the clinic. We also tell them during our community meetings. But we see that many still give birth at home” (local officials, village midwives, FGD).

However, the five dukuns argued that, because of the new policy, they had stopped giving birth in their village. They explained that if called upon to assist a woman with a home birth, they would advise the family to find transportation to take the woman to the puskesmas. Moreover, they explained that they accompanied the pregnant woman to the hospital. Furthermore, traditional birth attendants indicated that they only gave birth at home in “emergency situations”

Theme 2: The decision-making process regarding the place of delivery and the use of traditional birth attendants

This theme focuses on the decision-making process regarding delivery/postpartum care at home and the use of traditional birth attendants. Informants had mixed feelings about women's decision to give birth at home. They explained that the family had different opinions about who made the final decision. All informants in in-depth interviews (except husbands) and most of the FGD participants stated that the final decision whether pregnant women should give birth at the puskesmas or hospital or not was made by the family.

"The family decides. We usually sit down with them to discuss, but they make the final decision. Some women decide for themselves" (mothers giving birth, postpartum mothers).

On the other hand, some participants and their husbands in FGDs with many children thought that women made their own decisions, based on their past experiences during childbirth. They just told the husband about it. Most of the FGD participants (with few children) thought that young women and those who were inexperienced in childbirth consulted their parents for the place of delivery. In addition, most of the young mothers mentioned that they followed the advice of the midwife at the clinic.

Regarding the decision to seek birth attendant services, all participants in the FGD and in-depth interviews mentioned that when women gave birth at home, they would tell their husbands to call the birth attendant. If the husband is not at home, the woman will ask other family members, children, neighbors or parents to contact the birth attendant.

"If a woman is not feeling well, she sends her husband away and calls a dukun to help him. If her husband is not around, she sends her children or neighbors to school" (35 years old FGD participant).

Low Risk Perception

The low risk perception of their personal susceptibility to pregnancy and delivery/postpartum complications is one of the main reasons why most elderly women with multiple children give birth at home. Most of the informants explained that although most older mothers were aware of the severity of childbirth complications, most of them believed that, compared to younger women, their personal susceptibility to pregnancy and childbirth/postpartum complications was low and that they were not personally at risk for complications. Like that, because of their experience during childbirth. Moreover, most of the FGD informants (both who had given birth in a health facility or who had given birth at home) believed that they "knew themselves" well because they had many successful deliveries in the past. In addition, they believe that they have sufficient experience in childbirth and can recognize the possible complications that may arise during childbirth.

On the other hand, most of the FGD participants were young and some (especially those who had given birth in a health facility), and all midwives, coordinating midwives and heads of puskesmas explained that most young women gave birth in health facilities because none of them had experienced childbirth and that they were afraid of childbirth complications. postpartum if they give birth at home.

"Most women with multiple children don't even worry about childbirth complications because they believe that they are used to it, and that they know for themselves that they are not facing any problems during childbirth. They said that even if I had a problem, they would call the dukun or give me a potion to drink; I just conveyed" (FGD participant / mother).

Negative attitude towards health workers

Several informants in in-depth interviews (except midwives) stated that most women who gave birth at home had negative attitudes towards midwives and services at the puskesmas or hospital or health services because of the way they were cared for during ANC care or during previous delivery/postpartum. As confirmation, most of the FGDs, and most of the informants in the in-

depth interviews, including all mothers, mentioned that sometimes the midwives in the hospital were harsh with women during labor and used abusive language to them.

Regarding their experience of giving birth in a hospital, women have mixed feelings. Several women including FGD participants with two children, and several mothers with one child, who had given birth in a hospital during previous deliveries, explained that the midwife took care of them and saved their lives after they experienced complications of childbirth/partum such as excessive bleeding, retained placenta and eclampsia. (high blood pressure, headache). On the other hand, several other FGD informants who had given birth at a health center/hospital complained that during previously in the health facility, the midwife shouted at them during delivery. Strikingly, all husbands had a positive attitude towards the midwife, while the birth attendants were reluctant to comment on the issue. The midwife explained that most puskesmas and hospitals did not have enough staff to care for mothers in labor and those with general medical conditions.

Family related factors

Dependence on family for financial support and decision making is seen as one of the main reasons women cannot give birth in health facilities. The husband and family are considered the most important people in the decision-making process and the decision is usually final and most pregnant/maternity/postpartum women will accept it.

All informants in in-depth interviews (except husbands) and most of the FGD participants stated that pregnant women depend on their families and husbands as service providers. If the husband and family do not have enough money to support his wife, he will delay making the decision to allow his wife to go to the hospital. In this case, she will give birth at home.

On the other hand, all husbands who participated in the in-depth interviews were of the opinion that the men in their neighborhood did not forbid their wives to give birth at the clinic. Instead, they encourage and support them to do so. Another factor preventing mothers from giving birth/postpartum in health facilities is that the family or birth attendant will take care of the mother with the culture of the Malacca community after giving birth to a child or during the postpartum period.

“Most women fail to give birth at the puskesmas or hospital because of their husbands/families. They depend on their husbands to allow them” (midwife).

"We have to do *tuhik* (*tattoobi*) and *hatka ha'I* (fire roast), so that the mother is healthy... (the mother of the mother giving birth)

Health system related factors

All FGD participants and all in-depth interview participants indicated that most mothers gave birth at home because they saw various obstacles that prevented them from giving birth in hospitals/puskesmas. The main barriers mentioned include lack of funds for baby clothes and maternal needs during and after delivery, poor quality of health services due to unavailability of midwives, negative experiences with nurses during previous ANC visits or delivery/postpartum, long distance to health centers and geographical conditions which is very bad, the state of the labor ward is poor and the absence of the Maternity Waiting Home, where it exists, is in very bad condition. Other obstacles include the lack of funds for food for pregnant women and their accompanying families during and while waiting for delivery in the waiting house.

DISCUSSION

In this study, we began to investigate the reasons why women decide to give birth at home rather than in a health care facility, and how they perceive traditional birth attendants. For this purpose, we interviewed mothers who had given birth to their children (0-3 months) and other key informants from the area, namely husbands, mothers, birth attendants, local officials, village midwives and puskesmas midwives and heads of puskesmas and head of the MCH section in Malacca District Health Office. Consistent with previous research (Sialubanje, et al., 2015a), our findings show that the majority of women in Malacca District are aware of the existence of traditional birth attendants and they are more likely to be members of their own family (grandmother, big mama/aunt) in the area and have an attitude of positive about them. They believe that traditional birth attendants play an important role in providing care for women in the community including health education, ANC services and postpartum care. In addition, our findings suggest that, despite policy changes in Indonesia and the flagship program in NTT discontinuing the training of traditional birth attendants and recommending that birth attendants stop delivering at home, and that all women should give birth in a health facility under the supervision of a qualified health worker such as a midwife or doctor, many women still give birth at home and traditional birth attendants still play an important role in assisting them. This finding is consistent with previous studies and studies from other developing countries (Sialubanje, et al., 2015a; Titaley et al., 2010) which reported that home delivery and the use of traditional birth attendants were still preferred for some women in rural areas.

Our findings also suggest that, although all women need to give birth under skilled care, public health strategies and policies need to take into account women who do not have access to facility-based skilled delivery and postnatal care services in rural areas, and the consequences of such refusal for those delivery services. the most basic and benefits of a trained traditional birth attendant. For example, the lack of medical supplies and logistics to enable traditional birth attendants to perform clean delivery and postnatal care can put mothers and their babies at risk for infection during labor and puerperium. Regarding the decision-making process at the place of delivery and the use of traditional birth attendants and postpartum care, our study highlights the important finding that although most of the informants believed that the husband or family was the primary decision maker, all four husbands in our sample denied making the final decision for their wives; they believe that women make decisions and only tell husbands about it. What's more, especially young couples consult with their parents for the final decision. Furthermore, when considering calling the dukun beranak services, women decide when the dukun should be called home. During childbirth, women will usually ask their husbands to call a dukun to come home and help him. If the husband is not present, the children or neighbors will help call a dukun. This finding is important because it differs from previous studies (Sialubanje, et al., 2015a; Sialubanje, et al., 2015b; Speizer et al., 2014), which suggested that husbands make the final decision whether women should give birth at home or not. Our findings show that birthing mothers are also active participants in the decision-making process regarding their health-seeking behavior, especially in terms of the use of traditional birth attendants.

In line with previous studies (Sialubanje, et al., 2014; Titaley et al., 2010), our findings suggest that various factors including individual, family/relatives, socio-cultural norms and health system-related factors influence women's decision to give birth at home and seek the services of traditional birth attendants. For example, our findings show that despite being aware of the risks associated with pregnancy and childbirth and the puerperium, as well as their severity, and the risks involved in delivering a delivery at home without skilled rescue workers, most mothers do not believe that they are personally vulnerable to the complications associated with this. related to childbirth and postpartum at home. This finding is consistent with other studies (Speizer et al., 2014; Story et al., 2012) which have demonstrated the importance of perceived

vulnerability as an important factor influencing health behavior change. Interestingly, this finding contradicts previous studies in Zambia as well as in other developing countries (Grigg et al., 2014; Singh et al., 2012) which suggested that women who gave birth at home were less knowledgeable about the risks associated with this behavior. In addition, persuasive messages that focus on building knowledge and creating awareness about the severity of health problems may not prove successful if people underestimate their personal risks and vulnerabilities (Speizer et al., 2014).

In addition to the perception of low risk, our findings show that most women who give birth at home have a negative attitude towards the health services provided in health care facilities (puskesmas/hospitals/clinics) because they are considered poor quality because the midwife is not present when there is a delivery. Negative experiences with care/care during previous ANC visits or labor and postpartum, poor condition of the maternity ward, and lack of privacy. In addition, women experience various obstacles including lack of funds for baby clothes and maternal needs during and after delivery/postpartum and/or local transportation, long distances to health care facilities and geographic conditions that prevent them from giving birth at the puskesmas or hospital or clinic. In our opinion, public health interventions focused on improving maternal health outcomes would benefit from targeting women's perceived vulnerabilities as an important determinant of their health behavior change. Public health interventions would also benefit from reducing the physical and economic barriers that prevent women from accessing maternal health services.

Our findings show that social and cultural norms that encourage women to depend on their husbands, parents and others and cultural practices (Tatobi/tuhik or hatuka ha'I/baka api) that are important for the final decision about place of delivery contribute to the majority of women give birth at home. For example, our findings show that despite participating in discussions about preparation for childbirth, most women rely on their parents/other family members for the final decision.

The low social status of women and dependence on husbands for resources and financial support can cause delays in making decisions about where to give birth which often results in most women giving birth at home. This finding is consistent with our previous findings (Speizer et al., 2014; Allendorf, 2010). These studies highlight the important role of women's decision-making and autonomy in the use of maternity/postpartum services/care at facilities and show that women who have autonomy are more likely to give birth in health facilities. In addition, these findings are consistent with those of Thaddeus and Maine (1994) who demonstrated the importance of decision making in limiting access to, and utilization of, maternal health services. Together, these findings highlight the importance of empowering women and families with decision-making skills and resources to reduce the barriers that complicate them. These findings also highlight husbands, parents, and friends as important targets of intervention.

Researchers also found that women's positive attitude towards traditional birth attendants was an important factor that motivated women to give birth at home. In general, the informants showed high trust and confidence in traditional birth attendants and had many positive beliefs about them and the benefits that could be obtained from using their services. They describe traditional birth attendants as people who are available, reliable, familiar, skilled, polite, patient, respectful and caring, cheap or free. The results of another study showed the same thing that living with traditional birth attendants in the same community, knowing them, and having trust in them were found to be important factors influencing women's attitudes towards traditional birth attendants. Most women indicated that traditional birth attendants had a “more human”

attitude towards mothers during labor than nurses. Indeed, the nurses, who usually cannot be found in the clinic, shouted at them during childbirth. These findings are consistent with previous studies (Wilunda, et al., 2014; Sialubanje, et al., 2014; Titaley et al., 2010; Grigg et al., 2014) which suggested that public health interventions would benefit from a focus on improving staff and motivation levels for midwives and nurses in the clinic, as well as encouraging collaboration with traditional healers.

Women's decisions about place of delivery appear to be influenced by their evaluation of the comparative advantages of either giving birth in a clinic or staying at home waiting for help from a traditional birth attendant. In addition, women's evaluation of these perceived benefits appears to be, in large part, based on their past experiences with in-clinic or home deliveries. After engaging in health behaviors, women will evaluate the expected outcomes, based on available information from their past experiences (Sialubanje, et al., 2015a; Titaley et al., 2010). Thus, Public health interventions and the formal health system would benefit from recruiting and motivating midwives and nurses to serve in their local communities, and providing the skills needed for traditional birth attendants. Indeed, incorporating traditional birth attendants into the formal health system may significantly increase the number of deliveries and postnatal care in hospitals/clinics. Interestingly, home birth is associated with various advantages for women such as privacy and comfort during labour, as well as maintaining contact with “other family members”.

The perceived benefits of giving birth at home are contrasted with the difficulty of sleeping in a mother's shelter without a bed or mattress and giving birth in a delivery ward of a health facility/clinic where they do not feel any privacy. Therefore, women believe that not all pregnancies/delivery/postpartum should be treated. In addition, lowrisk pregnancies/delivery/postpartum should be identified during ANC and allowed to take place at home under supervision and skilled care linked to a functioning referral system. These findings are consistent with studies from Nigeria [30], but also from other developed countries, countries where approximately 21% of pregnant women choose to deliver at home indicating that planned home delivery for low-risk women is not associated with an increased risk of poorer maternal outcomes. detrimental (deJonge et al., 2013; Statistics Netherlands, 2014; Titaley et al. 2010). In the current study, women's evaluation of their perceived medical safety and that of their baby was not only based on the availability of a birth attendant during and after delivery, but also on women's perceptions of the skills and abilities of the birth attendant, previous experience of not being at risk and feeling safe/normal.

This finding is in line with previous studies (Srivastava, et al., 2015; Srivastava et al., 2013) which showed the importance of perceptions of quality of care in influencing women's attitudes towards birthing places and birth attendants. Future studies should focus on evaluating the perceived and actual quality of care among TBAs and evaluating their skill level. Such an evaluation could have important policy implications for the continued use of traditional birth attendants in midwifery care in developing countries, and the decision whether to provide more formal training to this group. Several potential limitations of our study should be noted. First, this finding is only based on the experiences of women who received FGDs and in-depth interviews with several informants. Because FGD participants were recruited in the community during community meetings, we do not have information about how many were approached or how many refused to participate in the study. Moreover, the husbands' experiences were not explored for logistical reasons. FGDs with husbands and families as well as health providers can provide a balanced view of the factors that determine the choice of place of delivery/postpartum care and preferences for birth attendants.

CONCLUSION

In conclusion, our findings suggest that a large proportion of women give birth at home due to several individual, family and health system factors including women's low risk perceptions regarding their personal vulnerability to childbirth/postpartum complications, negative attitudes towards facility delivery services, lack of decision making autonomy about birth of children, and dependence on husbands and other family members for decisions about place of birth and birth attendants and postpartum care. In addition, various physical and socio-economic barriers including long distances, geographical conditions and the need to carry baby clothes and food during pregnancy and childbirth and postpartum care practices prevent women from choosing health care facilities for delivery and postpartum care. Women's positive attitudes toward traditional birth attendants, or women's perceptions that dukuns are skilled, respectful, friendly, trustworthy and available when they need them, motivate them to seek dukun services and prevent them from utilizing skilled facility-based birthing services. These results offer a starting point for future interventions that, in our opinion, should focus on increasing women's decision-making autonomy regarding childbirth and also empowering them with the skills and resources to improve their socioeconomic status.

The findings also highlight the need to help women understand the benefits of giving birth in a health facility. In addition, interventions and policies should focus on husbands, parents, and friends and on increasing staffing levels in health facilities, by ensuring midwives, doctors are always available, and by motivating midwives to serve in their local communities by providing them with financial incentives, housing and training. The relationship between traditional birth attendants and midwives should be strengthened through close collaboration and the establishment of a functional referral system. Lastly, interventions aimed at reducing physical and economic barriers through provision of maternal shelters/waiting homes and improvement of existing shelters, and providing women with resources What is needed, such as a mother-infant package, can persuade more women to go to a shelter/waiting house at the puskesmas and wait for delivery and post-partum care there. Resources at the national level must be carefully targeted to ensure that government services will succeed in instilling confidence in NTT women and facilitating them to overcome cultural, geographic, economic and logistical barriers to accessing "free" services.

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