

## **Decision Making towards Maternal Health Services in Central Java, Indonesia**

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### **ABSTRACT**

**Background:** Indonesia has always been struggling with maternal health issue even after the Millennium Development Goals (MDGs) programs were done. Prior research findings identified many factors which influenced maternal health status in developing countries such Indonesia and even though various efforts had been made, the impact of the transformation of maternal health behavior was minimal.

**Purpose:** This study aimed to seek an understanding of the factors influencing decisions towards maternal health services.

**Methods:** A case study with a single case embedded design was employed. Interviews and Focus Group Discussions (FGDs) were held to collect data from 3 health workers and 40 maternal women in a sub-district in Central Java, Indonesia.

**Results:** Interviews with the village midwives as the main health providers in the Getasan sub-district concluded that there were several factors influencing the women's decisions towards maternal services. The factors were options to have services with other health workers outside the area, and shaman services as alternative care and family influencing maternal health behaviors. The analysis of the FGDs also supported the village midwives' statements that in spite of their awareness towards the available maternal health services, the existence of shamans and traditional beliefs strongly affected their decision.

**Conclusion:** The findings in this study showed that cultural issues prevented the maximum maternal health status in Getasan sub-district. This study recommends *Puskemas* (Primary Health Care) as the first level of health institutions in Indonesia to support the village midwives' roles within their target area.

**Keywords:** Maternal health; health policies; community health

## BACKGROUND

Maternal health problems still become an issue in Indonesia, and the Maternal Mortality Rates (MMR) is one of the instances. In 2011, Indonesia had the highest MMR in South East Asia, which was 228 deaths/100.000 women (United Nation Development Program, 2014). A further study identified that the contribution of high MMR in Indonesia came not only from rural areas but also the urban ones. Central Java as one of the most populated urban areas in Indonesia also has a high MMR. In 2015, it had more than twice number of MMR above the target of the Sustainable Development Goals (SDGs), which was less than 70 deaths in every 100.000 births (World Health Organizations, 2015). The Central Java Health Quarterly Report in 2015 stated that there were 437 deaths from 100.000 births from October to December 2015. It was also stated that Semarang, which was the location of this study, was identified as one of the regencies with high number of MMR (Department of Health, Central Java Province, 2015).

Maternal deaths in Indonesia are mostly preventable. As described in the Information Centre of Ministry of Health Republic of Indonesia, the three main causes of maternal deaths in 2013 were bleeding, hypertension and infections (Ministry of Health Republic of Indonesia, 2014a). A previous research on maternal health care and health outcomes had shown an important association between antenatal care visits and the utilization of skilled childbirth attendants in improving health outcomes. The research exploring the use of village midwives in Indonesia concluded that when pregnant women attended four or more antenatal care sessions, childbirth by a traditional birth attendant reduced by 70% (Titaley, Dibley & Roberts, 2011). Antenatal care was delivered in most of the maternal health facilities in Indonesian communities, including the *Posyandu* (an extension of primary health care which provides integrated health care services including the maternal and child health care), village health centers, subsidiary *Puskemas* and *Puskemas* (Primary Health Care/PHC). Most of the antenatal care sessions were provided by midwives and knowledge on the importance of childbirth with health care professionals was delivered throughout the antenatal session. This trend is also supported by the evident in research in Bangladesh which found that attendance at antenatal care sessions among pregnant women in rural areas increased the use of skilled birth attendants by 50% (Anwar, et al., 2008).

Maternal health services, which include antenatal care sessions, in Indonesia have been delivered in many approaches. Community based programs delivered through the PHC and the village midwife programs were established to increase community participations to transformed individual health behaviour (Ministry of Health Republic of Indonesia, 2014b). Figure 1 depicts the contributing factors which influence maternal health services in Indonesia. It is clearly seen from the figure that the issues influencing maternal health occur not only in the bottom of the system, which is the implementation and delivery; but also from the top, which is the maternal health system and facilities. Most of the issues affecting maternal health care services in the communities are congruent with the Three Delays model suggested by the United Nations (United Nations, 2006). The model describes: 1) the delay in seeking pregnancy or emergency obstetric interventions caused by a lack of knowledge, cultural beliefs and economic difficulties; 2) the delay in accessing health facilities caused by lack of physical access

and transport; and 3) the delay in receiving sufficient care caused by an insufficient number of midwives, low quality of midwifery care and failure of the PHC referral system.

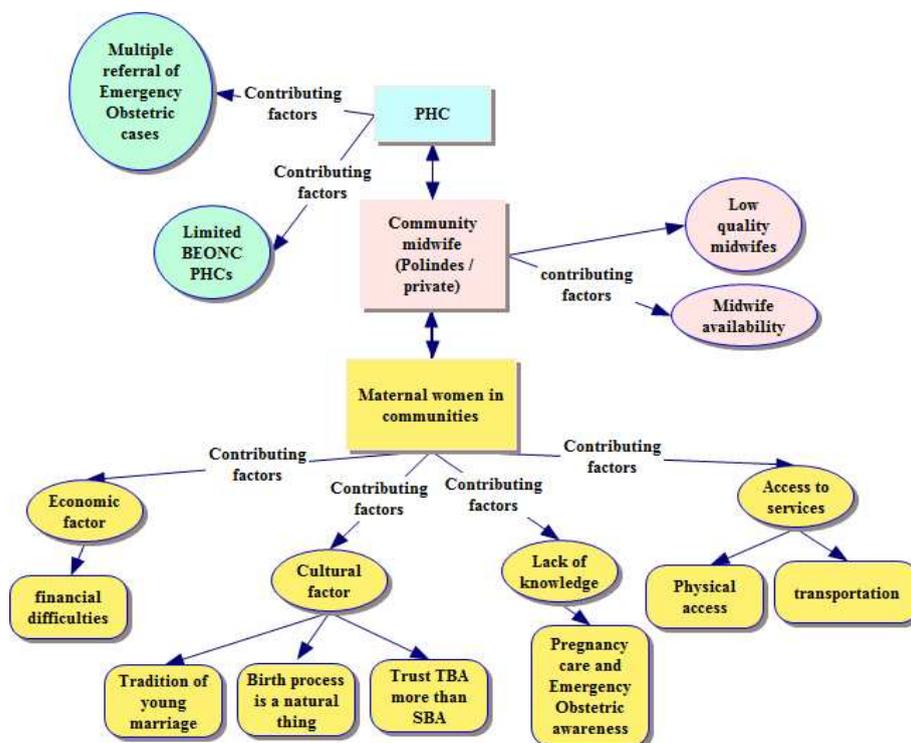


Figure 1. Contributing factors to maternal health issues in the PHC level Indonesia  
 Adapted from D’Ambruoso, Byass & Qomariyah, 2008; Titaley, Hunter, Heywood & Dibley, 2010; Webster, 2012; World Bank, 2010

A previous research shows that there has been much effort to increase maternal health status in developing countries. An analysis of the current policies and programs has been conducted to explore their implementation and impact in communities in some developing countries, such as India, the Philippines, and Bangladesh (Ahmed, Hossain, Khan, Mridha, Alam & Choudhury, 2010; Kalter, et al., 2011). Several programs have been implemented to increase the community awareness of maternal health. The main factor that emerges from the literature is the effectiveness of community involvement especially from women's groups towards increasing maternal health awareness (Bhutta, Soofi, Cousens, Mohammad, Memon & Ali, 2011; Mullany, et al., 2010; Prost, et al., 2013).

Through the prior research findings, it can be concluded that there were many factors which influenced maternal health status in developing countries such Indonesia and even though various efforts had been made, the impact of the transformation of maternal health behaviour was minimal. Thus, it is important to explore deeper into the real conditions in communities, and identify the gaps and obstacles that might prevent access to the available maternal health services. This study attempted to construct meaning and understanding of the delivery of maternal health services in a sub-district area of Indonesia. However, this article will specifically describe the aspects that

influence the utilisation of maternal health services, which will develop a better understanding of the communities' perspectives towards maternal health care services.

## OBJECTIVE

This study aimed to describe the delivery and access of maternal health services in a PHC in Central Java, Indonesia.

## METHODS

### Research design

In order to understand the maternal health situation in the real context, a case study with a single case embedded design was chosen as the method of this study. Yin (2014) describes case study as an approach that is able to deal with several variables and rely on multiple sources of information, the results of which are triangulated. The data collection process was conducted on January to April 2015.

*Table 1. Unit analysis, sources and methods of data collection process*

<b>Aim</b>	<b>Research Question</b>	<b>Unit Analysis</b>	<b>Sources</b>	<b>Data collection method</b>	<b>Sampling</b>
	How are maternal health practices being delivered to the sub-district communities?	Community based maternal health care practitioners	Health workers involved in maternal health programs in the sub-district communities	Semi-structured interview	Purposive
			Documents and archives related to methods, interventions and evaluations of maternal health services	Document analysis	Purposive
How are maternal health care services delivered and utilised in a sub-district area?	How are maternal health care services accessed and used by childbearing age women in the sub-district communities and what aspects influence accessibility?	Maternal health care recipients	Childbearing age women	Focus Group Discussion	Purposive

As described in table 1, a thorough description of the maternal health care situation will be constructed from two units of analysis: maternal health workers and recipients of maternal health care.

### **Research ethics**

This research had been approved by the University of the Sunshine Coast (USC) Human Research Ethic Committee (HREC) with the ethical approval number HREC: S/14/714. Furthermore, recommendation letters from the Office of Unity and Political Affairs (No. 070/0027/I/2015) and Health Department of Semarang Regency (No. 070/210) were also obtained before the data collection. Potential FGD participants were informed verbally of the study as it can be culturally intimidating to provide and ask participants to sign written documents, information and statements of agreement. The consent to participate was assumed when the women attended the FGD at the prescribed time.

### **Sampling and criteria**

Purposive sampling was chosen for this study to enable the researchers to develop criteria for the participants in accordance with the problem and the context (O'Reilly, 2012). Maternal health care practitioners in Getasan PHC were recruited with several criteria which were: registered as part of a health worker team in the PHC, had a recognized degree in a health field, and were involved in the delivery of maternal health care programs in the PHC and willing to contribute as participants in this study. The criteria of the samples for the last unit of analysis – the maternal health care recipients, were women of childbearing age: 15 to 49 years old (World Health Organizations, 2015), lived in the target area of the PHC and attended a local *Posyandu* in the PHC's target area.

### **Recruitment process**

The recruitment process for the maternal health care recipients was performed through several steps. The maternal health program's coordinator was approached for the researcher to have access to join *Posyandu* in each targeted village. Information about this study was delivered through fliers which were spread to all PHC staff members. Through these fliers, all PHC staff members who matched the criteria were invited to be the voluntary participants in this study. Three village midwives were then recruited as participants for the second unit of analysis. The researchers introduced this study to the village midwives who provided maternal health services in each village, and together with the village midwives, approaches to the maternal women were made through involvement in *Posyandu* activities. Potential participants were informed verbally and maternal women in each *Posyandu* were offered voluntary participation in this study. Through this process 40 women from 8 villages were recruited to participate in this study.

### **Data analysis**

The data from the interviews and FGDs were transcribed from the audio data files into the written transcriptions. The transcriptions of the interviews and the data from document study were then analyzed using a ground up strategy. In this study, the researchers read and reread the transcriptions. Interpretations of answers and discussions were done by the researchers to build understanding of the participants' perspectives. Keywords and key sentences were then marked and coded to categorise the data according to their similarity and connections. The pattern of this study and perspectives of participants emerged into the themes which explored the natural elements of the case study.

## **RESULTS**

### **Demographic details**

In this study, 3 village midwives and 40 childbearing women from eight villages in Getasan PHC's target areas were recruited as participants. It was identified that the average age of three village midwives were 38 years old. All of them had their diploma in midwifery and have been delivering maternal health services in the villages of Getasan regency for more than ten years. As village midwives, they have been living in the community and become respectful members of the communities. Through the analysis process, it was also found that the average age of the FGDs participants was 29 years old and the average age of marriage was at 20. It was also identified that there were eight women who were under 18 years old when married and four of them were married before they were 16 years old. With regards to the Indonesian marriage law No.1/1974, the minimum age of marriage in Indonesia is 16 years old. However, the law is currently being reviewed in the Judicial law because of its contradiction with the Child Protection Law No. 23/2012 which states that children under 18 years old are under their parents' protection and unable to make decisions for themselves before they turn 18.

Like most of the population in Getasan, the economic conditions of FGDs' participants in this study depended on crops and livestock. The FGDs' participants were mostly housewives who also supported their husband in different activities on the farms. Some participants through informal conversations said that despite of their pregnancies, they still had regular activities in the farm such as collecting grass to feed the cattle. The context of maternal women in most of Getasan's villages was described by the midwife participant that mentioned different roles of mothers in the households.

“The people here have heavy jobs: looking for grass, feeding cows. Looking for grass is a very heavy job. In one day, people can do it for five or six times. So, we try to keep mothers' health here. It's very complex. Husbands usually work. Wives or mothers, on the other hand, have to take care of house, husbands, and even they don't take care of their own health” (HW2).

### **Village midwives' perspectives on the factors influencing maternal health decisions**

Physical and economic factors were not the only concerns, as consideration towards women's maternal health behaviour was perceived as a significant factor towards the choices of services. Options to have services with other health workers outside the area, shaman services as alternative care and family influences towards maternal health behaviour were identified as factors which affect the maternal health behaviour in communities within Getasan PHC's target area. Ideally, all maternal health care in the village would be performed by the village midwife in the area. However, there was an emergent concern from village midwives that the choice to use senior midwives, who were mostly located in other villages, would complicate the supervision towards pregnant women in the community. The decision to use the midwives' services from other villages was also affected by the hamlets' locations which were spread across the area. Some of the hamlets were closer to midwives' practices outside of the participants' village. A participant said that she lived next to another village which was

administratively registered as a different sub-district and gave services for everyone regardless of their location of origin. Collaborations with other village midwives were acknowledged as one of the approaches used to supervise the maternal health status of maternal women in each area.

“Health examination for pregnant women should be done only in Tolokan village, so that the village midwife knows...., but sometimes the women have [their] check-up in another village because they prefer another midwife or other reason... I asked her about that [matter, she said] why should I go to Posyandu when I can go to [a] senior midwife?”. (HW2)

“I live next to another village and subdistrict. I may not work as the midwife there, but I still give health service to the people there. Why do I accept them? It’s because they come, so I serve them”. (HW3)

Arguments on factors which influence women’s decisions regarding their reproductive health were the communities’ considerations to use shamans as one of the maternal health care providers. The term of shaman is used in this study to describe the history of traditional birth attendants in most of Central Java, who in the past were believed to have mystical power to cure illness and to deliver babies in a traditional community. The definition of shaman then developed into the current meaning of traditional attendant, as a person with traditional midwifery skills obtained from generations of knowledge without the requirements of a professional midwife. Shamans were in the community before the existence of village midwives, so they are a part of the village culture. In this study, it was perceived by the village midwives that shaman care has always been an alternative for maternal women in Getasan’s communities and there were concerns that midwives’ roles can be easily replaced by shamans.

“...the people also have poor awareness. So, even though they have money, instead of calling midwives, they prefer to give birth with shamans”. (HW3)

“If I don’t come every day, the family will suggest others to call shamans for labour”. (HW3)

Village midwives also perceived that families’ trust towards shamans as a part of their custom was a major influence on women’s decision in the choice of maternal services. Through the interviews, it was identified that initial beliefs passed on by shaman had become a challenge for the village midwife in transforming women’s behaviour. It was described that traditional beliefs always become the families’ considerations when a decision towards maternal health needs to be made. It was common for most participants to live with extended family, and decisions in the family were most likely made based on the family agreements.

...there is an opinion saying, “Do not have USG screening, just believe the baby will be healthy. Long time ago, there were only shamans and it was fine. Now, why should people have laboratory checking, USG screening, do that, do this”. (HW1)

“The role of shamans and psychics is significant. For example a person should be treated in *Puskemas* because of acute anaemia. They will consider (the

shaman's advice) on the right day to bring her to *Puskesmas*; not Saturday because it is the forbidden day to go out. They will also consider the right hours, from this to this hours. The situation is complex here; it is hard to change that". (HW2)

Another aspect of family influences towards women's decision on their reproductive health behaviour was family traditional beliefs. There were several traditional beliefs identified in village midwives' interviews: encourage under age marriages to prevent premarital intercourse and to have children as their economic assets; reject family planning in early marriage because it will decrease the chances of future pregnancies; belief in "good days" and "bad days" for a child to be born; traditional postpartum care which did not allow women to sleep during the day time and recommended innutritious food, such as fried salt and roasted tempeh. Other beliefs such as a baby cries mostly because of hunger and needs to be given a formula milk even prior to 6 months of age; and immunisations will bring illness to newborn babies were also found as families' beliefs which participants' felt had been affecting women's maternal health behaviour.

"There are a lot of women who give birth when they are 15 or 16 years old since they think that getting married in early age is not a problem so that when they are getting old, their children will be adults. The people here have heavy jobs: looking for grass, feeding cows. Looking for grass is a very heavy job". (HW2)  
"...they predict one's luck from a certain measurement, "If you go to search medicine now, you will find none but death." Perhaps because it is the day of a certain year after the death of the person's grandfather or great grandfather. Such things influence health service here. There was a case when a pregnant woman was about to have labour, they said, "do not labour now, do it tomorrow. Today is certain Saturday with no good luck..." (HW2)

### **Women's perspectives of maternal health services**

Perspectives from village midwives strongly emphasised the existence of shamans and traditional beliefs which influence the maternal health behaviour of women in Getasan's communities. However, discussions with maternal women's participants concluded their awareness of the available maternal health services and their ability to utilise maternal services were based on their needs. From the dialogues, it is perceived that the village midwife was their first choice of maternal health care. Maternal women participants also mentioned the available options for maternal health services and the shamans' role were rarely mentioned throughout most of the discussions.

"Here, the midwife has a good service. So, the treatment starts from the midwife. Actually, patients can be directly referred to hospital or *Puskesmas*". (FGD6MC1)

"When I was going to deliver a baby, the midwife wasn't at her place so I had USG checking at DKT (a district hospital). And, I was referred to get treated for 2 days. But, my baby wasn't born yet, so at night, the doctor decided to do caesarean operation. ... (the midwife carried out) Immunization, KB, *Posyandu* ... pregnancy examination too. After pregnancy, women are visited from the

seventh day, when the baby's umbilical cord has fallen off, and until the baby gets BCG vaccination". (FGD6)

Village midwives acknowledged shamans as the alternative maternal health care services in Getasan's communities. However, it was identified from the discussion with women in the community that the use of shamans in their maternal health decisions was mostly for the services not provided by village midwives. Most of them said that they utilised shaman care for their comfort, both physical and cultural. In addition, none of the maternal women participants mentioned shaman as their main provider for the maternal health services.

"There are women who use a shaman's and midwife's services. But, there are also those who only use a midwife's service. If they use a shaman's service, still they use a midwife's service. So, both of them. There are no women who only use a shaman's service". (FGD2)

Most of the maternal women recognised shaman as a part of the communities' culture and it was important for the maternal women in Getasan PHC's target area to use shamans' services and experienced the cultural comfort. The examples of services provided by shamans are body massage for the post-labor mothers and conducting a Javanese ritual of umbilical cord burial. The maternal women participants mentioned that based on their observation, the women in communities often used both services from the village midwives and shamans to complete their childbirth process.

"The villager's culture is giving birth with shamans... It's like thanksgiving... For example, after giving birth, a woman must get massage three days later. Then, shaman must bury the baby's umbilical cord. Villagers still follow Javanese custom". (FGD5)

"Even though midwives handle pregnant women, they should be accompanied by shamans since people think if they don't have shamans with them, they feel it's not complete. So, usually neighbours and other family members still go to shamans when giving birth.... Shamans can still take care of patients, but after labour. Many women want to have massage after giving birth". (HW2)

## **DISCUSSION**

Th findings from this study have shown that there were several factors which affected the utilisation of maternal health services in Getasan PHC's target area. The village midwives perceived that geographic and economic issues were causing the delay in accessing health facilities. However, traditional birth attendants or shaman have always influenced families' decisions towards the maternal health options. The beliefs towards traditional practices are acknowledged in several studies. Some studies show descriptions of deeper understanding and meanings of traditional practices for maternal women and families in most developing countries. The literature shows that there was a relationship between traditional practices and people's religious and superstitious beliefs; it also describes the significant role of families in the women's decisions to use

traditional practices (Dennis, Fung, Grigoriadis, Robinson, Romans & Ross, 2007; Raven, Chen, Tolhurst & Garner, 2007).

This study found that shamans and their traditional practices also have important meanings for Getasan's communities where the cultural comfort and the convenience of having full assistance from shamans during the post labour period were found to be the reasons for having shamans as alternative maternal care. It can be concluded that geographical and economic barriers in villages under the Getasan PHC's target areas may not be the real issues, as shamans have always been an alternative care providers. However, the discussions with maternal women in eight villages within Getasan PHC's target area showed that despite of their beliefs towards shamans, village midwives were their first choice for maternal care. It was perceived by the maternal women that integrating midwives services with shaman care would provide the maternal care that they need. The integration between midwives and shaman practices in Indonesian communities was assumed to be one of the reasons for the increase in Indonesian women's maternal health status. The enhancement of maternal health status in Indonesia is seen from the significant decrease of maternal mortality ratio (MMR) from 430 in 1990 to 190/100,000 living birth in 2013 (World Health Organizations, 2015). Significant improvement of maternal health care in Indonesia was also identified by the increased percentage of skilled attendance labours in Indonesia from 60% in 2008 (World Bank, 2010) to 83.1% in 2012 (World Health Organizations, 2015), and the increase of four sessions of antenatal care from 66.1% in 2007 (Titaley, Hunter, Heywood & Dibley, 2010) to 87.8% in 2012 (World Health Organizations, 2015). However, despite the major progress, the maternal health status in Indonesia has not reached the aim of the MDG5, where the MMR was targeted to be reduced to 107/100,000 live births in 2015.

The use of both village midwives and shaman practices is an adjustment in maternal health culture in Getasan's maternal women. This transformation in maternal health behaviour was identified to be created gradually after years of the village midwives existence. Richerson, & Boyd (2005) stated that the culture is adaptive when the individual learns more effectively. Richerson and Boyd (2005) also described the effective learning model, such as imitation, which enables individuals to observe best behaviour towards the acts as the result of experiences. The imitation process which happened to the maternal women in Getasan's communities indicates the success of midwives' strategies in delivering maternal health care for the communities. The use of role models was perceived to be effective in providing real examples of the benefit of the services. Freedom to choose the available services and a comfortable approach through cadres were experienced by maternal women as a safe learning which was easy to accept.

The community based programs such as *Posyandu* and village health centers were designed to increase the tangibility of health services. The services given by most of the community based health programs were free and located in each hamlet in each village, which reduces the economic and geographic barriers to accessing services. Cadres or community health workers were the connectors between the village midwives and the maternal women in the community. They were identified as having significant functions

in delivering the maternal health information to the women in communities and to support families during pregnancy and labour. As described in the background, Bhutta, Soofi, Cousens, Mohammad, Memon & Ali (2011); Mullany, et al (2010) and Prost, et al, (2013) provided evidence on the positive impact of the involvement of cadres in increasing the use of maternal health care in developing countries. Further studies in the same documents concluded that as members of the society, the community health workers were creating supportive environments for maternal women to learn; information was delivered casually in the community routine and through daily communications. It is also shown from the discussions with the maternal women in Getasan PHC's target area that they were willing to listen to the cadres' suggestions to use midwives' services instead of shamans. As part of the community, cadres were able to approach and inform the women with maternal health knowledge as a normal part of daily village life. From the perspective of the Health Belief Model, cadres were building their personal capacity and community capacities (Nutbeam, Harris, & Wise, 2010). By having the knowledge of the impact and consequences of a lack of awareness of maternal health, the cadres perceived the threat of unsafe maternal care and understood the benefit of their functions in the community. Their understanding towards the problem had increased their level of self-efficacy; therefore, they were enabled to help the community with their knowledge and skills.

## CONCLUSION

The findings in this study showed that th geographic and economic issues; the existence of traditional birth attendants, and the family traditional values towards maternal health services had prevented the maximum outcome of the policies especially the cultural issues which affect the decision making on maternal care. Maternal health services were identified to be accessible. However, inspite of the awareness of available resources, shaman services as alternative care and family influences still affect the maternal health services that are chosen. The result of this study can be used as supporting evidence for the PHCs as the first level of health institution in Indonesia for the provision of support for village midwives within their target area. Te results of this study may be used as supporting evidence for further study in the delivery of maternal health care in Indonesia or other developing countries with a similar context.

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