Conference Paper

Pregnancy-related Myths and Maternal Mortality Reduction

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Abstract

Maternal Mortality in Indonesia is a serious phenomenon for the government. There are a number of policies and programs to reduce Maternal Mortality Rate. However, the treatment currently focuses on medical and clinical problems of mothers during the pregnancy, yet ignores the physical, biological, social, and cultural context at the micro, messo and macro levels.

Attempts to reduce Maternal Mortality Rate is inseparable from cultural role, particularly the myths in the society. This article reveals that pregnancy-related myths may influence maternal mortality rate. These myths are related to consumption style and risk behavior that endanger maternal health during the pregnancy, delivery, and postpartum. To minimize the negative effect of myth for pregnant women there must be behavior changes involving the support of client system, particularly husband, parents, parents in law, other relatives, and traditional midwives. This descriptive research employs qualitative method. data was collected by in-depth interview with key informants who were pregnant women aged between 15 to 40 years and auxiliary informants such as husband, biological mother, parents in law, other relatives, health officers, public cadres, and traditional midwives.

Keywords: Myths, Pregnancy, Maternal Mortality, Client System, Behavioral Changes

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1. Introduction

Reducing the Maternal Mortality Rate (MMR) in Indonesia is a serious concern. So far the government has developed several programs to mitigate this problem. However, the program has not shown significantly relieving results. The failure of government programs indicate that the programs were not based on the real problems in the society. Besides that, the government's programs and policies are not comprehensive and multi-leveled.

Indonesia has the highest Maternal Mortality Rate (MMR) in South East Asia (Rachmaningtyas, 2013). Based on the results of Indonesia's Survey on Demography and Health in 2012, although the rate once declined, however Maternal Mortality Rate increased significantly from 228 per 100 thousand in 2007 to 359 per 100 thousand in 2012. Meanwhile the target of MDG in 2015 Maternal Mortality Rate was 108.

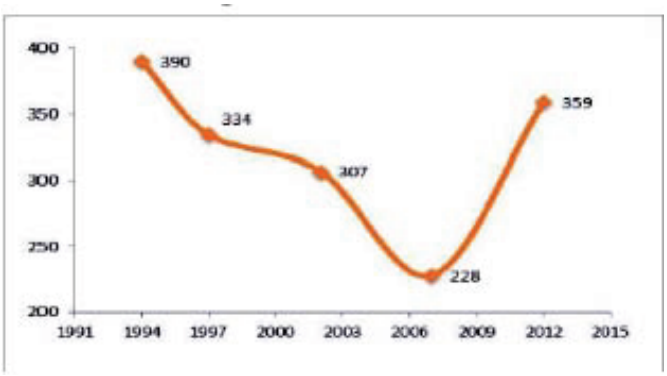

Figure 1: Maternal Mortality Rate in 2002-2012 (Source: (Profile of Demography and Development in Indonesia in 2013, BKKBN)).

One of the main factors causing the high Maternal Mortality Rate is the low awareness of the health of pregnant women in the society. This is apparent in low participation of pregnant women's visit to puskesmas (public health care) to have pregnancy checkup.

Table 1 shows that there are 3.1% of pregnant women who have not had their pregnancy checked up. Of the total number, the pregnant women who have not had their pregnancy checked up in rural areas are 4.8% and in urban areas is 1.3%. This implies that awareness of pregnant women to know their pregnancy health is relatively low.

Meanwhile, there are 10.7% pregnant women who have their pregnancy checked up at the pregnancy age of 4-5 months and 2.6% of pregnant women have their pregnancy checked up at the pregnancy age of 6-7 months. This implies that at the first trimester pregnant women have not had their pregnancy checked up.

Another factor that contributes to the high Maternal Mortality Rate is minimal utilization of health facilities in delivery process. Based on the data provided by SDKI in 2012, only 53-65% pregnant women delivered their babies at health facilities. This rate shows that approximately 40% of pregnant women delivered their babies at home and at other places.

The low access to health facilities, according to Director General of Maternal and Pediatric Health and Nutrition of the Ministry of Health, Anung Sugihantono, is caused by the reluctance of pregnant women to visit health facilities (22.8%) and far distance from home to health facilities (10.5%) ?. To anticipate the increasing Maternal Mortality

Table 1: Percentage of Pregnant Women Having Pregnancy Check Up. (Source: SDKI 2012).

Quantity and Period of Check-up	Residence Area		Total
	Urban	Rural	
Quantity of Pregnancy Check-up			
Never	1.3	4.8	3.1
1	0.9	2.2	1.6
2-3	4.6	9.1	6.9
4+	92.7	92.9	97.8
do not know / no answer	0.6	0.9	0.7
total	100	100	100
at least one visit during trimester 1, trimester 2 and at least twice visit during trimester 3	79.6	67.5	73.5
age of pregnancy in months during the first visit of the pregnancy check-up			
Never Check-up	1.3	4.8	3.1
<4	84.8	76.2	80.4
4 – 5	10.7	12.7	11.7
6 – 7	2.6	4.3	3.5
8+	0.4	1.3	0.9
do not know / no answer	0.2	0.6	0.4
total	100	100	100
number of women	7358	7424	14782
median month of pregnancy at first visit (for mothers who do check-up their pregnancy)	2.1	2.6	2.4
number of women who check-up their pregnancy	**7.26**	**7.066**	**14.327**

Rate, the government has launched a number of programs such as delivery assurance program or the program locally named "jaminan persalinan" (jampersal). However, according to Agus Laksono (Former Minister of Public Welfare) the program is not successful so that MMR remains high and even increases (Rachmaningtyas, 2013).

So far researches on Maternal Mortality Rate focus on the causes of the high Maternal Mortality Rate from demographic perspective [1, 8, 18] and medical perspective [13, 17]. There are only few, or hardly any, multidisciplinary researches on Maternal Mortality Rate. Researches on Maternal Mortality Rate are usually viewed at individual level [16, 19] or at policy level (Shiffman, 2007). No comprehensive research on Maternal Mortality Rate that view the problems at micro, messo, and macro levels.

Any attempt to decrease Maternal Mortality Rate is inseparable from culture, particularly the myths in the society. The pregnancy-related myths have different forms in different places. Sometimes, the myths at a particular extent endanger the attempt of decreasing the Maternal Mortality Rate. The myths discussed in this research are the dangerous myths such as suggestion to consume herbal medicine and prohibition to consume particular nutritious foods for pregnant women as well as the behavior or action that endanger pregnancy such as massaging to reposition the fetus by the traditional midwives.

This article reveals that pregnancy-related myths may cause higher mortality rate, since there are many myths particularly the myths related to the consumption style and risky behavior endangering the mother in pregnancy, delivery process and postpartum period. To minimize the effects of dangerous myths on pregnant women there must be behavior changes that involve supports from client system, particularly husband, parents or parents in law as well as other relatives and traditional midwives.

Therefore, those efforts will reduce the negative effect of myth on pregnancy during the pregnancy, delivery process and parturition period.

2. Methodology

Methodologically, this research uses a qualitative approach. The objectives of this research with the qualitative approach are to describe the economic empowerment program for poor women. this research employs qualitative approach since it characteristically inductive. this research derives from facts and data of field findings to be compared to theoretical thought in new concept development (Neuman, 2006: 15). Qualitative approach is preferred in this research since the objective of this research is to see the Influence of Myths on Pregnancy to Decrease Maternal Mortality Rate in Indonesia.

This research is characteristically descriptive. Descriptive research seeks and explores facts and requires accurate interpretation and consistence of information. This descriptive research is used to explore and clarifies the social phenomena or reality in the society by describing a number of variables. This is intended to clearly describe the subjects and objects of questions [14].

Data was collected by face-to-face in-depth interview between interviewer and informants or interviewee, with or without guidelines where interviewer and informants live in the relatively similar social life [6]. Data of interview was then processed by using the program of N-vivo 10 to facilitate analysis of large qualitative data.

Table 2: Percentage of Pregnant Women Having Childbirth in Health Facilities. (Source: SDKI 2012).

Karakteristik Latar belakang	Fasilitas kesehatan						Persentase persalinan di fasilitas kesehatan	Jumlah kelahiran
	Pemerintah	Swasta	Rumah	Lainnya	Tidak terjawab	Jumlah		
Umur saat melahirkan								
<20	16,8	36,6	46,0	0,2	0,5	100,0	53,4	1,526
20-34	16,4	48,0	34,9	0,1	0,6	100,0	64,4	12,757
35-49	21,9	41,1	35,8	0,2	1,0	100,0	63,0	2,665
Urutan kelahiran								
1	18,4	50,9	30,2	0,1	0,4	100,0	69,3	6,557
2-3	17,0	47,2	34,9	0,2	0,7	100,0	64,2	7,892
4-5	16,0	32,4	50,1	0,1	1,4	100,0	48,4	1,827
6+	13,1	19,1	67,1	0,0	0,6	100,0	32,3	672
Jumlah kunjungan periksa kehamilan								
Tidak pernah	4,7	5,8	77,3	0,4	11,6	100,0	10,6	456
1-3	10,6	22,9	66,3	0,1	0,0	100,0	33,5	1,243
4+	18,7	50,7	30,5	0,1	0,0	100,0	69,4	12,974
Tidak tahu/tidak terjawab	13,5	33,1	53,3	0,0	0,2	100,0	46,6	109
Daerah tempat tinggal								
Perkotaan	20,4	59,5	19,3	0,0	0,6	100,0	80,0	8,405
Perdesaan	14,2	32,5	52,4	0,3	0,6	100,0	46,7	8,543
Pendidikan ibu								
Tidak Sekolah	10,7	10,4	76,1	1,2	1,6	100,0	21,1	365
Tidak tamat SD	15,4	22,6	61,3	0,2	0,5	100,0	38,0	1,457
Tamat SD	14,4	32,8	51,5	0,2	1,1	100,0	47,1	3,976
Tidak Tamat SMTA	15,6	45,4	38,5	0,1	0,4	100,0	61,0	4,438
Tamat SMTA	20,8	59,0	19,7	0,1	0,3	100,0	79,8	4,594
Perguruan Tinggi[2]	20,9	65,5	12,8	0,0	0,8	100,0	86,4	2,119
Indeks kuintil kekayaan								
Terbawah	14,0	15,6	68,9	0,3	1,1	100,0	29,7	3,727
Menengah bawah	20,5	36,7	41,8	0,3	0,7	100,0	57,2	3,255
Menengah	18,5	47,7	33,2	0,1	0,5	100,0	66,2	3,311
Menengah Atas	17,7	61,4	20,5	0,1	0,3	100,0	79,1	3,437
Teratas	16,1	72,0	11,5	0,0	0,4	100,0	88,1	3,218
Jumlah	**17,3**	**45,9**	**36,0**	**0,2**	**0,6**	**100,0**	**63,2**	**16,948**

[1] Hanya untuk anak yang dilahirkan lima tahun sebelum survei

[2] Perguruan Tinggi adalah: Diploma, S1/S2/S3

This research was conducted in 2 provinces selected on purposive sampling technique. They had highest MMR in Java Island (Pekalongan) and beyond Java Island (Nusa Tenggara Barat). In the two provinces, two locations were assigned to represent rural characteristics of kabupaten and urban characteristics by considering MMR in the locations.

3. Profile of Informants

To select the informants, this research employs *purposive sampling technique*. According to Neuman (2006), *purposive sampling* technique allows the researcher to select sample suitable for the research objective. Informants in this research were pregnant women and reproductive-age women (15-40 years old). They were selected due to

their high-risk pregnancy associated to the pregnancy interval, pregnancy age, and illness.

Pregnant women's husband or other family members serve important assistance to the women during their pregnancy, delivery process, and parturition period, which may be associated to the probable mortality.

Such health workers as doctors and midwives play an important role in decreasing Maternal Mortality Rate by reducing the negative effect of pregnant-related myth in the society.

Other informants are traditional midwives. They were interviewed to identify the attempts that they have taken to keep the pregnancy and the programs they have received to improve their capacity and capability in the treatment of pregnant women.

4. Theoretical Framework

Maternal mortality refers to the death of women due to pregnancy impairment, treatment (excluding incidental case and accident) during pregnancy, delivery, or postpartum period (42 days after giving birth) regardless of the pregnancy age [9]. This combines bio-ecology model developed by Bronfenbrenner and health ecology as the basis of analysis. The two models are multidisciplinary analysis that combines social, environmental, medical sciences to analyze health-related matters in the society (Bronfenbrenner, 1994; Mc Lerroy & Townsend, 1998). In his theory Bronfenbrenner reveals that individual life influenced by social system at micro, messo, and macro levels that are mutually related. However, on the contrary, as an active social agent, individual's personal characteristic also influences the social system [3–5]. Meanwhile, medical ecology believes that humans and environment (physical, biotic, and sociocultural environments) influence each other. Therefore, beside diseases, medical problems may also be influenced by physical, biological, and socio-cultural environments [12, 21]. The model of bio-ecological system of pregnant women is as follow:

This research uses several assumptions. First high Maternal Mortality Rate in Indonesia is inseparable from medical problems and diseases among the women during pregnancy. However, it is also influenced by physical, biotic, social-cultural environments at micro, messo and macro levels. Second, Maternal Mortality Rate is also influenced by personal characteristics and human capital of the pregnant women who later form and influence their bio-ecological system. Third, therefore, the high Maternal Mortality Rate can only be resolved with a planned intervention program and optimal bio ecological system for pregnant women.

Table 3: Model of Bio-Ekology of Pregnant women.

Individual Pregnant women	Microsystem	Messosystem	Macrosystem
- age	- Couple /husband	- Access to health service	- Government policy
- education and knowledge	- Extended family	- Dietary habit	- Health program for pregnant women
- occupation	- Health service officers	- Local culture and wisdom	- Religious Doctrine and faith System
- Ethnic			- Health assurance System
- Geographic Location (rural –urban)			- Social Media
			- Local Indigenous Revenue

One of the factors that influence the bio ecological system is Myth. Myth is etiologically unknown story that present unscientific belief of anthropomorphic and animistic forms. Myths are reserved through rituals, customs and traditions, social bound and culture [2]. Scientifically a myth is equivalent to the knowledge of commonsense that is likely to be inherited and imitated over generations with etiologically unknown origin, untested and without any empirical evidence of why that should happen [20].

Principally, myth serves the function of prohibition, instruction, or suggestion. This research discusses about pregnancy-related myths during pregnancy, delivery, and parturition period. This research classifies myths into two categories. The first category includes the myths endangering the pregnancy that may increase Maternal Mortality Rate. The second category includes the myths not endangering the pregnancy. Each category of myth is further classified into consumption (food and beverage) and behavior or action.

To decrease Maternal Mortality Rate planned and structured behavior change is needed. To understand how behavior can change, J.O. Prochaska suggested that behavior change is indicated in several stages and it include several ways.

Several stages of behavioral changes are described in the following [15].

1. *Precontemplation* refers to the condition in which an Individual has no intention to do anything in the coming of 6 months. They do nothing because they have no idea of the consequence of their behavior. They refuse and avoid discussing, reading, or thinking about risky behaviors). They are not prepared to change.

2. *Contemplation* refers to the condition in which an Individual has intention to change in the coming 6 months. The individual starts to realize the pros and cons of behavior change, and consideration of the costs and benefits of the behavior change may result in ambivalence. The individual may take much time in this stage and is not prepared to change.

3. *Preparation* refers to willingness of individual to change in the coming one month. The individual has changed significantly in the past one year and has a plan to change. This individual should be engaged in the intervention program.

4. *Action* refers to modify behavior in the past 6 months. Since action is observable, change is perceived to be equivalent to action and behavior change is observable based on the expert or professional criteria as the behavior adequate to reduce diseases.

5. *Maintenance* refers to maintaining behavior to keep it from *relapse.* Individual is likely to be unwilling to return to the unhealthy behavior and is more self-confident to continuously change the behavior. This is maintained in approximately 6 to 5 years.

6. *Termination* refers to the condition which is not always applicable in all kinds of behavior except addiction behavior. In this stage individual has strong intention and self-confidence to change the behavior. There is a strong motivation to have healthy behavior although the individual may feel bored, depressed, angry, lonely, or stressed. Individual is likely to leave unhealthy behavior as a way of *coping.* The individual has self-confidence to have healthy behavior to face up the challenging situation (*self-efficacy*)

According to Prochaska (1984) *Self-efficacy* refers to parts. They are *Confidence* to face up risky situations to prevent relapse of unhealthy behavior and *Temptation* to arouse unhealthy behavior in different and challenging situation. There are three exciting situations. They are negative effect or emotional pressure, positive social events, and *cravings.*

The change process includes observable or unobservable activities or behavior through the aforementioned six stages. There are 10 behavioral change processes [15].

1. *Consciousness raising* refers to awareness to problematic behavior, awareness to consequences and medication. Intervention related to awareness raising include feedback, confrontation, interpretation, bibliotherapy, and media campaign.

2. *Dramatic relief* refers to changes that result in emotional experience followed by an action. For example, the use of such techniques as psychodrama, role-playing, sadness arousal, testimony, and media campaign.

3. *Self-reevaluation* refers to evaluation/perception to cognitive and affective self to unhealthy behavior such as laziness and inactiveness. The technique used include confirming the possessed values, having a role-model, and using *mental imagery*.

4. *Environmental reevaluation* refers to affective and cognitive assessment to the existence of habits that may influence social environment. This also includes awareness that an individual can be a positive or negative role-model for other people. Trainings in empathy, documentary review, and family intervention are advisable in the assessment.

5. *Self-liberation* refers to changes and commitment to act in line with the belief. The technique includes resolution, public testimony to strengthen intention of change.

6. *Helping relationships* refers to attention, trust, transparency, and mutual support to healthy behavior change. The techniques include rapport development (trust), therapeutic collaboration, counseling, and *buddy system*.

7. *Counter conditioning* refers to seeking substitute healthy behavior for unhealthy behavior. The strategy may include relaxation, *assertion, desensitization*, nicotine substitution, and self-positive evaluation.

8. *Contingency management* refers to the rewarding to healthy (positive) behavior change and punishing to unhealthy behavior. Both observable and unobservable strengthen healthy behavior is ensured and group acknowledgement will continuously strengthen behavior.

9. *Stimulus control* refers to ignoring negative memories that may lead to unhealthy behavior and adding more positive stimulus to healthy behavior. Avoidance, rearrangement of environment, and self-help group may give stimuli to changes and reduce relapse risk.

10. *Social liberation* refers to increasing opportunity or seek alternatives for people in need through advocacy, empowerment, and policy support. It is realized that social norms will change to healthy behavior change.

Prochaska (1984) stated that in making an equitable decision human can reflect the pros and cons to behavior change. Jannis and Mann (1977) explains the model

of decision making consisting of four pro categories (earning instrumental benefits for self, and for others, and agreement with n self and with others) and four contra categories (instrumental expression to self and to others, and disagreement with self and with others) [15].

5. Findings and Discussions

5.1. Effects of myths on efforts to decrease maternal mortality rate

There are various pregnancy-related myths in Indonesia. They may be associated to food and beverage, behavior, or action. Myths in society can be categorized into myth endangering the pregnancy and myths not endangering the pregnancy. Some myths may be associated to maternal mortality. Myth is believed over generations. The origins are usually unidentified and thus they are questionable. From the two locations of research, it was found that nearly all people still believe in practices myths associated to pregnancy, delivery, and parturition period. The followings resume the opinions of the informants.

> *In my neighborhood and environment, we still believe and practice such myths (NRP, Productive age, 6 August 2015)*

The opinion reveals that a great number of society members are in the stage of *Precontemplation* where individuals have no intention to change. They do not take any action since they have no idea about the consequence of their behavior. In general, they refuse to discuss about myths. They are afraid of leaving the believed and practiced myths. The obedience is even stronger when the authorized persons such husband and parents instruct the pregnant women to practice the myths.

Several Myths not endangering in pregnancy include consumption pattern. Among others, the myths prohibit pregnant women to eat spicy and hot food or seafood. Nutritious foods for pregnant women therefore are frequently avoided.

> *No, we are traditionally prohibited to eat shrimps and others...my parents said so..... I prefer to obey them, since it is okay for me not eating shrimps. I still can eat other foods... We still can eat fish, egg, meat, ...still many others. It is better than seeing my parents get mad seeing me eating that. Not all foods are prohibited...at most shrimp, squid, so...there are many substitutes. (Nrs, Pregnant woman, 24 July 2015)*

Fish with stinger such as catfish, shrimp, pethek fish (a kind of salted fish)...I do not know...I do not know. I am afraid the stinger will be stuck...the delivery will be difficult...vegetable soup (the soup with spinach, mustard green). Spicy food is not allowed since it will make the ovum...painful... (Sup, traditional midwife, 28 July 2015)

During my pregnancy I eat much vegetable, meat, and egg.... we are not allowed to eat sea fish and catfish since it has stingers. (War, Pregnant woman, 10 July 2015)

There are a number of abstinences. For example, during early pregnancy we do not eat pineapples, fermented cassava or fermented rice, or durians since they may cause miscarriage. During later phase of pregnancy, we do not eat papaya since the baby will be hanging over ...the baby will not be easily delivered. We do not eat sembilang fish for fear that the baby will disappear. When we eat wrapped rice, we have to put it on the plate. When we eat apples or pears, they have to be sliced. We do not bite them.... I do believe since my parents say so (ZR, Pregnant woman, 10 July 2015)

To have a handsome or beautiful baby, a pregnant woman will have to consume red guava. The story tells so. However, I do not know the reality... pregnant women do not eat sluggish food...We are afraid that the delivery will be sluggish too. We are advised to drink green coconut water. The water of a piece of coconut is consumed three times a day... (Sub, Religious Figure, 28 July 2015)

The aforementioned opinions show that there are myths in the forms of prohibition or abstinence. It is expected that pregnant women avoid them. On the other hand, there are myths in the forms of suggestions during pregnancy, delivery, and parturition periods. Sometimes myths related to consumption are not dangerous for pregnant women, but several others may endanger pregnant women. for example, prohibition to eat particular foods which are actually nutritious and needed during the pregnancy and lactation periods.

Among the myths about pregnancy, there are myths that endanger pregnancy and may result in maternal mortality. The followings are opinions about the dangerous myths related to consumption.

Usually we take herbal medicines made of green herbs. They are not sold... Just the same. When we go to the 'dukun' (traditional midwife), the recovery is fast since they use herbals and spells. That is different from midwives. They use

injection.... usually once a month when I feel nausea. (for example, Pregnant woman, 6 August 2015)

Usually I go to kiyai (spiritual leader), taking the fresh water to which magic formula has been spelled. The water with magic formula is ideally not boiled. The boiled water is the dead water. I use 'aqua' sold in the stalls. It is not boiled but it is processed to become clean water. So the water is alive... (Sub, Religious Figure, 28 July 2015)

Taking the herbal medicine without any that has not been chemically tested in laboratory may contribute to the high rate of miscarriage and maternal mortality. Other myths commonly practiced in Nusa Tenggara Barat are drinking unboilled water believed to be 'living' water originally taken from natural spring. Good water is believed to derive directly from the natural spring. Unfortunately, many spring waters are contaminated. For example, in a village in Lombok Tengah there were many traditional tofu producers directly disposing the waste to the flowing stream in front of houses. The absorbed water may have contaminated the surface water or public wells and thus the water is not consumable and may cause diseases.

Besides the myths in consumptions, there are other pregnancy-related myth in the forms of actions or behaviors that are not dangerous to pregnancy such as prohibition to have their hair cut, to sit in front of the door, and others. The following opinions describe the myth practice.

No, the neighbor...(Laughing). Once I was pregnant ..., 2 months I think, I had long hair and decided to have my hair cut before I have a child. If I already have a child it will have no time to do it. I was already leaving with my husband, a neighbor said, "by the way someone is going to have her hair cut. Who is she", I replied "it's me mak..." I always call my neighbors 'mamak' (ma'am) just as if her children call her. She said, "Never have your hair cut ", well...then I cancelled to have my hair cut, it is only hair...that is all right. (Nrs, Pregnant woman, 24 July 2015)

It is worth noting that myths in pregnancy that endangers pregnancy and may cause maternal mortality among others are the habit of the society to have their body massage massaged by traditional midwife or locally known as 'paraji'. This habit endangers the fetus and may cause miscarriage or bleeding. It is even worse when the Paraji is unskilled.

Usually, when people feel tired they go to Paraji. People in this village go either to Paraji or midwives... here, tradisional medicines are considered efficacious. (Mar, Pregnant woman, 6 August 2015)

Taking herbal medicines and abdominal massage (restoring the uterus)...Taking medicines, taking adequate rest and having head massage or reflection with some pray or magical formula... (RS, Productive age, 10 August 2015)

We have our body massaged when the pregnancy is at the age of 2 months, 3 months, 4 months, and so on. When we feel...sometimes, we have stomach discomfort right? So for example when we feel tired, the uterus is getting lower. We think it is lower, and then we have our body massaged. However, during pregnancy we have our uterus restored once. (Ist, Pregnant woman, 10 August 2015)

... She (pregnant woman) only goes to 'dukun' to have her fetus position restored (SR, relative of pregnant woman, 6 August 2015)

There are always ways to reserve a myth while it is not proven true and the origin is not identified. Beside particular rituals to reserve a myth sometimes a myth is reserved by scaring off the people that they will be disadvantaged if they ignore the myth.

Well yes...when someone has not gone to a masseur, she is urged to see a masseur, if she refuses, she will be scared off (Anj, Pregnant woman, 10 July 2015)

Not only do the people go to the Dukun or Paraji when they are pregnant but also before pregnancy and after pregnancy. The aim is to maintain fertility. The following describes such a practice.

We take the traditional medicines given by the dukun once a month after menstruation to maintain fertility so that we can get pregnant and deliver babies... (It's) good and many people still take traditional medication (RS, Productive age, 10 August 2015)

People's reason to go to the traditional midwife or paraji is the simple access and lower cost. The following describes the reasons.

In Kekalik, people go there (first) because the pay is minimal. We do not have to spend much money to have our body berorah (massaged). Compared to the medical doctor's fee, it is cheaper. Now, seeing midwives is free, Sist. We just

have to show KTP (identity card) and we are served. Whatever our complaints are. (Ist, Pregnant woman, 10 August 2015)

Sometimes, people's unwillingness to access health services and their preference to traditional health providers have resulted in delayed treatment that may result in mortality. Moreover, when the pregnancy is risky. For example, in Lombok Tengah there was a pregnant woman who had diabetes but had not had her pregnancy observed in puskesmas since she preferred to have her pregnancy checked by traditional midwife. When she had emergency condition, she did not survive due to the delayed treatment.

The following is the story.

The deceased did not go to the doctor soon to have her baby's health checked. She just had her baby checked by a traditional midwife believed to be skillful in massaging (reflection) to maintain baby's health, (SJ, relative of pregnant woman, 10 August 2015)

The belief in myths may be even particularly more dangerous for pregnant women with hypertension and diabetes. They need routine examination and treatment for public health centers. The myth of having many children implies much fortune has motivated people to have many children and thus resulted in short interval of births. With such a belief, women did not care about the vulnerable pregnancy such as when women are already at the age of 35 years.

5.2. Successful efforts to decrease maternal mortality rate

There several efforts to decrease the effect of myth on society, particularly improving the role of Paraji by among others providing trainings for them so that they adequately acquire the required competence, knowledge, and skill.

In general, (the program) of Kota Pekalongan has been running well, since we can see the high rate of ANC... Almost 100% above 95% visit of k1 and k4. Currently, professional medical workers assist delivery. Previously traditional midwife assisted them. Now the traditional midwives become our partner. They assist midwives. For example, after the baby is born, the dukun will bathe the baby ... (Her, Health Service, 26 June 2015)

Yes...when we have a baby we ask the traditional midwife (dukun) for help. Gradually, the Health Service trains dukun. Therefore, there is a combination between their original skill and the trained skills. That is good. Now, almost

> *none. Now the Health Service through carries it out midwives, puskesmas. In hospital, doctors handle the patient. Most people go to midwives, including Bu Zahidah. She is popular in Panjang Wetan. Therefore, baby mortality is low here. Besides that, pregnant women have known to get immunization, have regular medical checkup by doctor midwives. Therefore, the baby's health is well maintained. When they are born, they are healthy. (Djs, Society Figure, 27 July 2015)*

> *Yes... in puskesmas, in Grapyak...I finished a year ago. Some others have not graduated after 3 years. The old ones... (Sup, Paraji, 28 July 2015)*

> *When I took the course... I knew that there is no abstinence in food intake. Pregnant women will have to go to midwives or puskesmas regularly, not to traditional midwife (dukun). Delivering a baby is not assisted by a dukun. After the birth, dukun may massage the baby. (Dar, Paraji, 27 July 2015)*

Efforts of the government and society particularly through the cadres in the society play an important role since to mitigate the problem of pregnancy-related myths. Behavior change will be possible through *Consciousness rising*. People have to be aware that some myths of behavior and consumption may endanger their pregnancy and delivery process. The government and the cadres have to raise the awareness about the consequence of the dangerous myths in the society. Intervention efforts related to awareness rising through education and information are then necessary.

Besides *Consciousness raising,* the government and society take the strategy of d*ramatic relief* that is the change resulting in emotional experience followed by an action. The people will have to see that their relatives or neighbors who had delayed medical treatment got fatal outcome. The process of *Dramatic relief* includes attempts to arouse sadness and testimony of relatives or neighbors of the persons who have such problems when they fanatically hold the myths.

Another process is *Helping relationships* where cadres and rural midwives are attentive, trusted, transparent, and supportive to the people who need help. In the two locations of research, in Kabupaten Lombok Tengah and Kabupaten Pekalongan, it was apparent that cadres work voluntarily. They disseminated information the importance of maintaining pregnancy health and leaving the myths. They were also willing to accompany pregnant women to have routine pregnancy check up to puskesmas or hospital for delivery process.

> *I accompany nearly all pregnant women in this village to have regular pregnancy check up to midwives or puskesmas... when they are going to deliver*

a baby and their husbands cannot send them to puskesmas or hospital, I'll accompany them to puskesmas or hospital (Kar, Cadre, 18 August 2016)

Another effort is socializing the danger of myths for pregnancy in the society. The puskesmas staff or society cadres usually perform this socialization.

"from elucidation, posyandu, sometimes we are invited, we are invited to attend..Oh this is from PKK ...there will be health elucidation. Cadres tell us about many things." (HA, Pregnant woman, 6 August 2015)

Elucidation by cadres, Health Service Ubung and Mataram. (Mar, Pregnant woman, 6 August 2015)

Currently, I am not practicing. I do not dare. Puskesmas forbids us to assist birth. About 7 years already... (Dar, Paraji, 27 July 2015)

The efforts have improved people knowledge and perspective about a number of myths that may endanger pregnancy. In other words, the society has had awareness about the false myths in the society. Even some people have entered the phase of behavior change "*Action*" where they have made behavior change and left the myths dangerous for their pregnancy and delivery process. The cadres and rural midwives consistently encourage the changes towards the level of *Maintenance*. At this level, people will not relapse to the old behavior and they become more self-confident because they have received appropriate information continuously delivered by cadres and midwives.

I never consume...traditional medicines ...we do not know the effect. The impact is not good. (NRP, Productive age, 6 August 2015)

In this modern era when we get pregnant we are not allowed to hold the stomach...when we feel fatigue and stiffness...we just massage the back (Nur, Productive age, 24 July 2015)

Here the pregnant women are usually not allowed to eat catfish, shrimps, eggs, or eels. However, I eat them, although out of their knowledge. People here forbid us consuming those nutritious foods, while midwives suggest us to consume them (Anj, Pregnant woman, 10 July 2015)

Behavior change also occurs among the society figures and religious figures. Bapak Sub, a religious figure, frequently use unboiled water or 'living water' to pregnant

women said that he realized that the ground water in his village is not hygienic any longer so that the used bottled water believed to originates from the hygienic natural spring.

> *I use aqua sold in the stalls. The water is not boiled. It is processed in a particular way. The water is 'alive'... (Sub, Religious Figure, 28 July 2015)*

Viewed from the perspective of behavior change, Mr. Sub has reached the stage of *Action* where he has modified his behavior into an observable *action*. Seen from the process, Mr. Sub has made *Self-reevaluation* where he evaluates his self-cognition and affection to unhealthy behavior. He also performs the process of *Counter conditioning*: learning to find the substitute for unhealthy behavior. Mr. Sub has used bottled water to keep the health of the society who ask for pray from him.

Intervention made by this research is making the calendar of pregnancy risk that includes the risks of pregnancy in each quarter. This calendar includes information about foods and drinks that must be consumed by pregnant women, and the behavior or action during the pregnancy, delivery process, and parturition period.

The calendars were given to pregnant women. In particular, the calendars were given to high-risk pregnancy. Cadres and midwives disseminated information to the families of pregnant women. They included husband, biological mother, and mother in law, siblings, or sister in law. The objective was to identify pregnancy risk by the supporting system around the pregnant women and families of pregnant women.

6. Implications of study

Culture contributes to high Maternal Mortality Rate in Indonesia where patriarchic system is adopted. Dietary menu of less nutritious food or junk food and myths in pregnancy are two examples. They have been practiced in the society and has deemed necessary for pregnant women. Therefore, it is an unconscious burden of culture.

There are many pregnancy-related myths in Indonesia. Some myths are dangerous for pregnancy since they may result in maternal mortality. They may be in the forms of prohibition or instruction of dietary menu and behavior or action.

Dangerous myths in pregnancy may cause higher Maternal Mortality Rate. Gradually, the number of dangerous myths decreases since the people have higher education. Higher education has resulted in better understanding about myths. Besides that, structured and planned efforts by such health workers as Midwives, Puskesmas staff, and the society (particularly Cadre of PKK, traditional midwife / paraji, society

leaders, religious leaders) are needed to improve the knowledge about reproduction health and information about healthy pregnancy.

With minimal adoption of dangerous myths there will be a behavior change among initiated by midwives will become the main reference for pregnant women. They are the main decision maker when high-risk pregnancy has to be referred to better health facilities such as PUSKESMAS or hospitals. Unfortunately, transferring pregnant women from home to midwives' clinics, and from the clinic to hospital is difficult since the limited access to transportation.

The high Maternal Mortality Rate in Indonesia is caused by medical and clinical diseases suffered by the pregnant women, but also influenced by physical, biotic, social, and cultural conditions at micro, messo and macro levels. The high MMR can be solved by planned and structured intervention program. Changes have to optimize eco-biological system of pregnant women such as improving the knowledge and awareness of the husband, biological mother, mother in law, sisters or sisters in law. It is expected that they can take the necessary action to handle high-risk pregnancy. Further, this will lead to the decrease of Maternal Mortality Rate.

Attempts to reduce the people's belief in myths will include the change of knowledge, belief and behavior. Therefore, it is necessary to have planned and structured actions to train medical workers, society cadres, and traditional midwives. They should disseminate information in the forms of posters, leaflets, brochures, and pregnancy calendar put in strategic locations.

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