



Food Taboos and Codes of Conduct for Pregnant Women at Mount Sindoro, Wonosobo District, Central Java, Indonesia

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ABSTRACT Undernourishment is a serious global health issue, threatening 165 million toddlers - ninety percent of them in Asia and Africa - with stunting. Indonesia has one of the highest levels of stunting prevalence, ranking fifth in the world. The people of Mount Sindoro, Central Java, have some of the highest stunting rates. This is caused by many factors, foremost of which is the undernourishment of pregnant women and toddlers. In that context, this paper discusses the food and conduct taboos for pregnant women in the area, as well as the beliefs in the Dieng region. The ethnographic study was conducted between July and October 2017. Data was collected through observation and interviews with 21 informants, including pregnant women, mothers of toddler, health providers, TBA's, cadre and local leaders. Food and conduct taboos for pregnant women are passed from generation to generation. These taboos are linked to labor complications. Food taboos are linked to the consumption of fried rice, durians, jackfruits, pineapples, and sugarcane. Codes of conduct, meanwhile, include carrying *dinglo bengle* (*Acorus calamus*, *Zingiber montanum*) when going out, eating from big plates, and smearing the bedroom door with oil, as well as prohibitions against napping, working in the fields, eating spicy foods, grilling food, throwing away garbage, thinking about disabled people, killing animals, and taking newborns outside the house before they are 40 days old. Violation of such taboos and codes of conduct are believed to negatively affect the labor process. The well-established traditions and local culture, as well as the fear of labor complications, influences pregnant women to obey these taboos and codes of conduct.

INTRODUCTION

Undernourishment is a serious global health issue. There are 67 million children and 18 million babies experienced low birth weight, while more than 200 million toddlers in developing countries die or are dying from undernourishment (Kariuki et al. 2002). These numbers are increasing daily.

Undernourishment threatens 165 million toddlers with stunting, ninety percent of them in Asia and Africa. The global target is to reduce the prevalence of stunting to forty percent by 2025, a rate of 3.9 percent per year. Indonesia is one country with a high prevalence of stunting; with a stunting prevalence of thirty to thirty-nine percent, it ranks fifth globally (Trihono et al. 2015). In 2014, Indonesia rank first in South-east Asia in stunting prevalence (Solahuddin

2015). The factor of stunting among the school children in West Sumatra, Indonesia is correlated with nutritional status. Meanwhile the mother's formal education and economic grade are influences of stunting also (Sulastri 2012).

It is ironic that Indonesia, with its rich natural resources, stability, and security, has a high prevalence of stunting. Despite the implementation of the 2015 Millennium Development Goals, Indonesia still faces problems of undernourishment, especially among children. As such, of the Sustainable Development Goals nutrition remains apriority, particularly the two: no poverty and zero hunger, both of which can be factors in undernourishment.

Undernourishment does not only affect babies, toddlers, and children; pregnant women also face the same problem. The prevalence of undernourishment (chronic energy deficiency) in pregnant women in Indonesia is 24.2 percent (Ministry of Health 2013). Stunting cases do not occur suddenly; they involve a long process, from the would-be mother's adolescence until pregnancy. According to WHO, there are about 450 million women in developing countries, including Indonesia, who live with growth prob-

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lems that are caused by childhood undernourishment as a result of poverty. Even in wealthier families, culture dictates that husbands and sons receive bigger and better portions of food, while mothers only eat the remainder. This remains true even though women, who undergo menstruation, actually need more nutrition - including iron and iodine intake - than men (Devi 2010; Irianto 2015).

The majority of stunting cases occur in poor and food insecure societies, but it is a global problem. It is, simply, an impaired growth process in children. According to WHO, one is considered stunted if one's height is less than -2 standard deviation from WHO growth standard. The national prevalence of chronic undernourishment (stunting) among children aged 6-12 years in Indonesia, according to the Indonesia Basic Health Research 2010, is 35.6 percent (Ministry of Health Republic of Indonesia 2011). East Nusa Tenggara province has the highest prevalence of stunting in Indonesia, reaching 58.4 percent (Picauly and Toy 2013).

Other data, taken from Trihono et al. (2015), shows Indonesia's historical stunting prevalence in children as thirty-two percent (2001), thirty percent (2004), 33.4 percent (2007) and 37.2 percent (2013). Stunting is a strong indicator of human resource quality, and marks a nation's decreased productivity in the future. It signifies future poverty, poor health, susceptibility to non-communicable diseases, and a lack of education.

The Indonesian government has made a strong commitment to overcome the problem of undernourishment by including it in the Long-term National Plan, 2005-2025. Efforts to overcome stunting have included, for instance, mass media publication. In one public service announcement, the Ministry of Health used Indonesia's Vice-President Jusuf Kalla and the slogan "Overcome stunting, because it matters". However, the strategy developed to overcome stunting has not been evidence-based. It is necessary to ensure valid mapping of the spread of stunting in affected regions and to identify the proper course of action for each region.

In western Indonesia, the prevalence of stunting has decreased. However, in Java, especially Central Java, stunting is still found in mountain communities such as those in Wonosobo Regency. In Sigedang Village, Kejajar District, Wonosobo Regency, has seen cases of stunting. The village is home to 22 stunted children.

Sigedang Village, on the slopes of Mount Sindoro, near Dieng plateau is known to have high prevalence of stunting among the villages of Kejajar District.

Stunting is caused by many factors, including maternal nutrition, anemia. During pregnancy, an unborn child receives its nutrition from its mother. Although pregnancy is the most crucial period in the child's brain growth, Javanese traditional culture still dictates several food taboos and sets certain codes of conduct for pregnant women. Some fruits, fishes, meats or chicken eggs, palm sugar, ice cubes are avoided among Javanese pregnant women in the village (Hartini et al. 2005). According to women, eating fruits, fishes, meat or chicken eggs will cause difficulty during delivery because the foetus would be upside down in the womb, while eating eggs will make them behave like chicken during delivery and would make delivery last longer (Oni and Tukur 2012). Food taboos whether scientifically correct or not are often meant to protect the human individual. The observation, for example, that certain allergies and depression are associated with each other could have led to declaring food items taboo that were identified as causal agents for allergies such as egg (Meyer-Rochow 2009). Cultural belief and food taboo for pregnant women contributes to the incidence of anaemia in many countries (Widyawati et al. 2015).

According to Rahman, there are many food taboos in Bangladesh also among pregnant women, related to pineapple and milk. He said: "Evaluation of the toxicity related to clinical signs, hematological and biochemical parameters, gross and microscopic findings propose that taking pineapple and milk at the time is not toxic". So this food taboo in Bangladesh is wrong (Rahman 2017).

Food and drink taboos, as well as prohibitions of certain behaviors among pregnant women and their husbands, are still common in Sigedang. These food taboos and codes of conduct are integrated, of equal importance, and equally binding to pregnant women. It is believed that violations of them will equally affect pregnant women. Even though modern healthcare exists in the region, local culture still strongly affects the taboos and codes of conduct experienced by pregnant women.

People of certain ages are more vulnerable to undernourishment, as a result of which they can easily suffer health problems. People in these

age groups are primarily in the developing years of their lives, and thus require more nutrition. These include infants, toddlers, pregnant women, and lactating women. Infants and toddlers are still growing rapidly, and thus require more protein, iron, calcium, and vitamins. Pregnant women, meanwhile, require more nutrition to promote the growth of the fetus and the smooth operation of organs involved in the pregnancy process. They also require more food as a source of calories (Irianto 2014).

Village communities establish several social values that should be followed by pregnant women, whom they consider vulnerable to outside influences. Pregnant women are perceived as physically and mentally weak, and thus vulnerable to diseases or other problems. Therefore, village communities consider it necessary for them to determine a code of conduct for pregnant women. This code of conduct is enforced by husbands, mothers, and mothers-in-law, all of whom are authoritative household figures. Pregnant women must observe several prohibitions of things deemed dangerous to the growth of her fetus. They are promised that, by obeying these rules, they will have a delivery process that is easy and free from complications.

Within such a social structure, infants, toddlers, and pregnant women are vulnerable to undernourishment. They are marginalized and experience discrimination, and thus cannot access proper healthcare. Their health needs are not the same as those of other members of society as they require more nutrients. However, they are forbidden from consuming certain foods/drinks; these prohibitions are perceived as protecting them from diseases or other health hazards.

Two factors affect undernourishment: genetics and environment (Fikawati et al. 2015). It is thus important to conduct a study of the environment factors that influence undernourishment among pregnant women. Genetics factors can be traced from previous generations. Undernourishment among pregnant women will affect the fetus. Environmental factors, meanwhile, can be traced further, to the period of pregnancy. In many communities, such as Sigidang, pregnant women are not allowed to consume certain foods and expected to follow certain codes of conduct during pregnancy. This is done to prevent unwanted accidents in pregnancy, such as miscarriage or labor complications.

The existence of such rules is supported by the social environment. In Javanese village culture, the sources and strategies of countermeasures and social network support are important (White 2011). Immediate or extended family can be protectors, or they can be the ones that marginalize. The role of family and neighborhood, including healthcare providers, can be very important for marginalized groups, as they are usually powerless in their communities.

Many people in rural Javanese villages are unaware when a family member is undernourished. They just ignore a situation and hope that problems can fix themselves. This occurs even when undernourishment occurs as a result of existing conditions, such as poverty, improper parenting, disease (from lack of hygiene or sanitation), or limited knowledge about nutrition (Ngaisyah 2015). The last of these can be seen in the taboos and codes of conduct applied to women during pregnancy. Traditional food taboos, for example, are usually related to sources of animal protein.

Taboos and codes of conduct are not only enforced on pregnant women, but also on their husbands. Pregnant women are expected to avoid eating prohibited foods because eating them is considered dangerous in supernatural way. Therefore, food taboos may be given supernatural explanations. Indeed, food taboos are usually categorized based on stages of life and the spiritual meaning behind them.

According to Warta Medika.com (Fimela 2017), several food taboos are commonly applied to pregnant women: unripe pineapples, cooked unripe jackfruits, seafood, foods with artificial sweeteners, high-fat foods, and salty food. These are considered dangerous to fetal development because they can trigger miscarriage, contain high doses of mercury, disturb the growth of nerves, or increase bad cholesterol and blood pressure (which can increase the risk of preeclampsia).

Similarly, in Javanese tradition there are 15 taboo behaviors still applied to pregnant women in village communities: sitting too long; bad-mouthing disabled people; sitting in the middle of the door; killing or tying animals; taking a bath at midnight; tying a towel around the neck; eating *alates*; cursing; eating banana blossoms; eating catfish; eating twin bananas; eating shrimp and crab; eating *kweni* mangoes and

durians; closing a hole; and stepping on animal waste (Retno 2015).

Eradicating undernourishment requires proper programs or policies, which must be comprehensively planned, as well as are intersectoral or interdepartmental. As such, practices related to food taboos and codes of conduct for pregnant women must be studied anthropologically, especially as related to local beliefs. Mapping the food taboos for pregnant women in Indonesia is important, as is applied research and multidisciplinary policies; all of these may have a medical impact on the prevalence of undernourishment in infants or pregnant women. Meanwhile, it must be recognized that food taboos may have certain social purposes, and thus they may continually be practiced. According to Ayuningtyas (2014), applied research is needed in policy analysis so that system and information elements can be communicated and used by policymakers to understand pertinent issues and find alternative solutions.

Studies of food in a cultural context refer to practical issues such as beliefs and medical practices among local communities. Nutritional anthropology is used to see the evolution of human history and culture, as well as its adaptation of nutritional variables in diverse environments. Culture determines the food consumed by people. Therefore, food is not just an organic product with a biochemical quality used for survival, but also formed by culture (Foster and Anderson 2000).

This study examines why food taboos and codes of conduct are still practiced by pregnant women on Mount Sindoro? What are the beliefs related to these taboos, prohibitions, and codes of conduct? Anthropology becomes relevant in probing the local wisdom related to food taboos and codes of conduct for pregnant women, as well as the logic behind them. Local beliefs related to these topics can be understood through local knowledge.

METHODOLOGY

Study Area

Ethnographic research was conducted in 2017 at Sigedang village, Wonosobo Regency, Central Java. This village was chosen because it is in Dieng plateau region, which produces many agricultural products, especially vegetables. Al-

though there is no lack of food, based on the information from the village chief, cases of undernourishment are still common among the population.

Interviews and Observations

Data collection involved observations as well as interviews with 21 informants: mothers of toddlers; mothers of stunted children; pregnant women and their husbands; mothers-in-law, and lactating mothers. These people were asked about their understanding of local healthcare traditions. Additional information was collected from local healthcare providers, village administrators, local leaders, traditional birth attendant, cadre, and midwives, as well as obstetricians from Wonosobo Maternity and Children Hospital. Observations focused on informant's daily activities, including how they practiced food taboos and codes from the start of their pregnancy, during pregnancy and after labor.

Data Collection

Data collection was done between July and October 2017. The researcher stayed at the community for several weeks. Interviews with informants were conducted at their homes, several times. This method was used to ensure the consistency of answers. Meeting informants was not easy, because most of them worked in the potato fields from the morning until the afternoon. Informants with infants were easy to meet because they chose not to work, instead seeking to take care of their child until it was old enough to be left at home.

Data Analysis

Data from participation, observation and in-depth interview was analyzed manually using selecting, extracting, attaching and similarity of the theme. Perspective of medical anthropology is used for interpreting the data.

Ethic and Participants Consent

District health officer and also village headmen gave permission for the study to be undertaken in Sigedang village. Besides that midwife and local cadres also gave some help and support for the research. All of the participants gave

verbal consent since some of the participants have low level of education.

RESULTS

The residents of Sigedang, who have worked as vegetable farmers for the last 30 years, have improved their financial situation because of yield improvement. By planting potatoes, cabbages, and carrots, their earning share increased from IDR 2.6 million in 1988 to IDR 24.8 million per year in 2017 (Sigedang Village Monograph 2017). Although their economic situation has improved, the number of poor has not decreased; the village is still home to 327 poor families.

Sigedang village used to be isolated, lacking access to transportation. This condition has changed; as their finances have improved, many residents have purchased automobiles, and many options are available for transporting crops. Almost all residents own motorcycles for their daily activities, either in the village or in town. Renting an automobile to travel from Sigedang to Wonosobo District Hospital, a distance of only 18 km, is still too expensive, up to IDR 300,000. In emergencies, such as when someone falls ill or enters labor, neighbors who own cars bring them to the hospital without charge. Such mutual help remains intact.

The healthcare facilities in Sigedang, with population of 3,121 inhabitants, are as follows: Village Health Care Unit (Poskesdes), Neighborhood Healthcare Unit (Posyandu), Kejajar Sub-district Community Health Center, midwives, traditional birth attendant, and shamans. More comprehensive health facilities are located in Wonosobo, Temanggung, Solo, or Yogyakarta, the latter of which are quite far from the village.

Of the many stages of women's lives, pregnancy is the one governed by the most rules. Pregnant women in Sigedang said that they must be careful in their behavior and consumption. Certain food taboos must be obeyed, starting from pregnancy and until labor. These food taboos may be applied for a first child or for any child. Taboos are mentioned by mothers to their pregnant daughters, or by mothers-in-law to their pregnant daughters-in-law. Grandmothers and neighbors also play an important role in teaching pregnant women about taboos and codes of conduct, as they are often involved

immediately with the pregnant women. Here are several food taboos known to locals.

All of the women interviewed said that the prohibition against eating fried rice is the main taboo for pregnant women. This taboo must be followed as soon as they learn of their pregnancy, as it is considered the main taboo. They said that they do not know the logic behind this taboo, only that it has been practiced for a long time. The mothers, mothers-in-law, and neighbors of pregnant women always remind them that they may face dangerous situations if this taboo is violated. According to some informants, this taboo is practiced as fried rice is perceived as causing difficult labor; a mother may lose consciousness, a mother may become lazy, or a child may be unhealthy.

The recipe for fried rice used by the residents of Sigedang, as well as residents of Mount Sindoro, usually includes several kinds of vegetables, including chilies, stink beans, lettuce, and cabbage, as well as protein sources such as eggs, meatballs, and chicken. This taboo is followed by all residents, regardless of social class or education. One mother, pregnant with her first child, R (26 years old, college graduate) said:

"Since I live with my mother-in-law, she told me not to eat fried rice, after learning that I was pregnant. I follow this taboo because I am afraid that something bad will happen."

RM (30 years old, primary school graduate), pregnant with her second child, said the same thing:

"Now I live in my own house, but I lived with my in-laws for two years, when I was carrying my first child. My mother-in-law told me not to eat fried rice when I was pregnant. After moving here, I have still followed this taboo with my second pregnancy. I am even more careful with this pregnancy to obey the advice of my mother-in-law."

Based on the information collected from informants, it can be seen that this taboo is generally obeyed, regardless of social or economic class. Women with college education are equally as likely to obey local taboos as women with lower education.

Pregnant women are also prohibited from eating chili peppers, as this habit may cause stomach ache and may lead to diarrhea. This taboo is followed by the pregnant women, because they feel the consequences of eating spicy food. When they want to eat spicy food, they

use only a little chili, to avoid the food becoming too spicy.

Pregnant women in Sigedang are not allowed to eat several kinds of fruit: durians, jackfruits, pineapples, and sugarcane. These fruits are not common in Sigedang, as the soil in the village is more suitable for planting potatoes, cabbages, and carrots. Rather, these fruits are supplied by other regencies, such as Magelang and Banjarnegara.

All of these fruits are believed to increase the body temperature and thereby affect the fetus inside the mother's womb, potentially causing miscarriage. Sugarcane also is believed to potentially cause *ngangkat kidang*, a condition when a mother in labor bleeds continuously and experiences extreme pain. One traditional birth attendant, Y (50 years old, no formal education), said:

"Pregnant women are not allowed to eat sugarcane. It will cause ngangkat kidang. It is always like that."

This statement confirms that residents of Sigedang, or more specifically pregnant women, do not eat sugarcane because they are afraid of *ngangkat kidang*. The pregnant women of Sigedang need not only observe food taboos, but also follow certain rules of conduct. Certain codes of conduct should be followed, and pregnant women should behave in certain ways. These codes of conduct, as prescribed by tradition, should be followed blindly, without inquiring the logic behind them. They obey tradition because they are told to do so by their mothers or mothers-in-law. Here are several behaviors expected of pregnant women in Sigedang village.

Residents of Sigedang believe that spices such as *dlingo* (*Acorus calamus*) and *bengle* (*Zingiber montanum*) can ward off danger from evil spirits such as ghosts. People with poor health - including, in local definition, pregnant/lactating women and infants - are believed to be susceptible to disturbance from these spirits. They are physically and mentally weak because they are expected to or have undergone labor. As such, pregnant/lactating women should always carry *dlingo* and *bengle* when they leave the house, which will ward off ghosts and other spirits.

"When I go out, I always carry dlingo and bengle, in the baby wrap. I have done this since I was pregnant with my first child, and contin-

ued until now with my second child" (RM, 30 years old).

From the beginning of pregnancy, woman's mothers and mothers-in-law will tell them not to nap during the middle of the day. Mothers-to-be, it is feared, may become lazy or inactive, and this will affect the unborn child. This prohibition is in effect until after childbirth. Even when they are physically weak, they are not allowed to nap. After childbirth, mothers must still do small activities to keep their bodies active. It is considered important not to take naps, and to focus on doing other activities.

In Sigedang, it is a tradition for women to breastfeed their children until they reach the age of 2 to 3 years. When breast feeding, most women choose not to work in the fields, but to focus on child rearing. Some mothers with children choose not to work in the fields until their children are in kindergarten. Many children ask their mothers to accompany them to kindergarten, and indeed taking children to kindergarten is viewed as a mother's task. The prohibition against working in the fields is optional. Mrs. U (47 years old, high school graduate) said:

"I gave birth to three children. After two weeks, I went back to work in the fields. I don't feel well if I don't work."

While Mrs. A chose to work in the field until her child was big enough to take care himself. She said that carrying a child to the field can disturb the work, since the child is difficult to manage and might destroy the crops.

A woman will replace the plate she uses for eating with a bigger one as soon as she is pregnant. In old times, they used large earthenware bowls, but nowadays this has been replaced with big plates made of glassware or melamine. The use of larger plates is intended to encourage women to eat more, because they also need to eat for their unborn children. Should a mother use a small plate, the mother would eat smaller portions. Therefore, women are expected to eat from bigger plates.

The door, as with the entire bedroom, is important for women during pregnancy. The bedroom is the main place where they do their daily activities, including resting. There exists a tradition of pregnant women smearing the bedroom door with oil before they go to sleep. By doing so, they promote an "oily" birthing process, and thus an easy delivery.

Not all pregnant women practice this tradition. Some have a different tradition that has the same purpose. Mrs. AR, for example, smeared oil on one of her bedposts and wished for an easy delivery process. Not all women observe this practice. It depends on whether they believe in the tradition or not. Mrs. I (23 years old), who has a stunted child, told her story.

"I never follow the tradition of smearing oil on the door. I only held a ceremony in my 4th and 7th months of pregnancy."

Mrs. I showed that she did not believe in the tradition of smearing oil on the door to ensure easy delivery. Although she has a child with bowed legs, she believed that this was not caused by her failure to observe the tradition, but caused by genetics. She said that she had an easy delivery process. Meanwhile, from the experience of women who observed the practice of smearing oil on the door, they followed the practice based on their belief. If they believed in the tradition, they believed that they would have an easy delivery. If they did not believe, even when they had a child with abnormalities, they did not believe that it was caused by their not observing tradition, but because of genetics.

Pregnant women are also prohibited from tying knots. When, in their daily activities, they need to tie something, they will ask another family member for help. They are forbidden from tying knots because it is believed that this will cause the baby to be born in a "tied" condition. As a precaution, they therefore avoid tying knots.

Pregnant women in Sigedang village are forbidden from grilling food, including satay, corn, and cassava. They are also prohibited from burning garbage and other items. Such burning activities are feared to have adverse effects on unborn children. As such, all baking, grilling, and burning activities are done by their husbands.

The prohibition is also extended to burning pants, including unused pants. It is believed that burning pants will make an unborn child ill. As told by Mrs. N (42 years old, fourth pregnancy), pregnant women are not allowed to burn the pants of children or of other adults. She said that, if this is done, the baby will be ill, and some sort of *pus* would be secreted from its ears.

However, pregnant women are allowed to cook in the kitchen, including with a wooden fire. Indeed, they are only allowed to cook in this manner, because the food is not heated directly by the fire. Pregnant women are also ex-

pected to maintain cleanliness. They must clean all cooking utensils immediately after cooking. The kitchen should also be kept clean.

Also related to cleanliness, pregnant women are not allowed to throw garbage in a landfill. As such, this task must be completed by another family member, such as a husband or mother-in-law. This prohibition is intended to keep pregnant women from unclean environments that will affect their health and their child's health.

The husbands of pregnant women are also subject to prohibitions. These include, for example, prohibitions against killing animals, be it big or small. According to local tradition, it is feared that, if the husband of a pregnant woman kills an animal without a proper reason, the child will have visage resembling that of the killed animal.

Therefore, when a woman is pregnant, the residents of Sigedang will warn husbands not to kill animals. If, for some reason, a husband must kill an animal that can harm his family, he will ask someone else to do so.

Women are also prohibited from saying bad things or even having bad thoughts about the disabled or stunted people around them. This is intended to prevent children from being born with disabilities. If a mother has a bad thought, this will become a reality for her child; it will be born either disabled or ugly.

In Sigedang, for generations it has been common practice to open doors and windows widely when a mother feels her first contraction. Although doors and windows in the houses of Sigedang are usually closed owing to the cold climate, when the first contraction is felt, one must open the doors and windows. It is believed that, by opening the doors and windows, the labor process would be made easy. Another purpose of opening the doors and windows is to ensure that fresh air enters the house. In Sigedang, labor often occurs inside the house, and the mother is helped by a midwife.

For generations, there has been no change in the traditional care of mothers after labor. In the past, when the village faced economic difficulties and had little access to transportation, healthcare, and information, lactating mothers were prohibited from leaving the house before the newborn child reached 40 days of age. Mothers were thus confined inside the house for this period, unable to attend funerals, weddings, or other social or religious events. This prohibi-

tion was intended to ensure mothers and children avoided the cold temperature, which is feared to cause sickness among infants. Even though this taboo applies to all mothers, not all of them observe it. When desperately necessary, mothers will still go outside before their children reach the age of 40 days, either for work or for other activities. As told by Mrs. A.:

"The day after giving birth to my second child in the Community Health Center (Puskesmas), I was bleeding and felt very weak. Finally I was taken to the doctor to be treated comprehensively at the Maternity and Children's Hospital in Wonosobo."

In her case, Mrs. A had to be taken outside the house to Wonosobo to treat a condition that threatened her life. She was hospitalized at the hospital for one day, and thus violated the prohibition against going outside the house.

The prohibition against going outside the house applies to both mothers and infants. Even when a mother gives birth outside the house, for example at a health center, she is still prohibited from leaving for 40 days. The prohibition differs slightly for sons and daughters. If a child is a boy, the prohibition lasts 41 days. If a child is a girl, the prohibition lasts 35 days.

Given the prohibition against going outside for children, the thanksgiving ceremony (*slametan*) for the child's successful birth is held after the prohibition expires. As such, the ceremony is usually held between 35 and 41 days after the child's birth.

Sawan is a condition that negatively affects the inflicted. There are four types of *sawan*: *sawan bayi*, *sawan manten*, *sawan dalan*, and *sawan mayit*. *Sawan* can strike anyone, from babies to adults. In children, symptoms include nausea, fever, restlessness, crying, and the inability to sleep. In such cases, children should only be held by their mothers. *Sawan* is believed to be caused by spirits near the house who disturb children who are physically and mentally weak. In addition to the cold climate, when children play too long outside the house they will be negatively affected. *Sawan bayi* occurs when an adult visits an infant and brings another infant or child, and the mother does not ask for baby powder. Baby powder is viewed as a charm that prevents *sawan bayi*, as something that ensures visiting infants or children are not inflicted with *sawan*. *Sawan mayit* occurs when a funeral procession passes by the house and the

infant is not hidden. Symptoms include the infant suffering a fever in the evening and not wanting to eat or drink. *Sawan manten* occurs when someone attends a wedding while bringing an infant. This infant might become afflicted, particularly when they are not fit. As said by Y (TBA's, 50 years old):

"Sawan may it, sawan dalan, sawan bayi and sawan manten can affect anyone who is not fit. Sawan can spread to other people. You will not feel well, or not have an appetite. A prayer and a glass of water can cure sawan, but for sawan bayi you need to ask for a little bit of baby powder and put it on the baby. For sawan dalan, you have to take a bath with leson flower water, ¼ handful of dirt, and 1,000 rupiah."

People believe in food taboos or codes of conduct because they fear it might negatively affect the labor process. The mother and child might become weak. In their view, food taboos and codes of conduct do not cause undernourishment or disabilities.

Interviews with informants show that they believe that stunting is not caused by food taboos during pregnancy. Pregnant women who obey the traditional taboos and prohibition do not worry that violations would affect their baby. They only worry about difficulties in labor, or a child being born with the appearance of an animal killed by her husband. They believe that food taboos and codes of conduct are not linked to undernourishment or abnormality. They are seen as different things, and as not influencing each other.

DISCUSSION

Sigedang can be categorized as a collective society, which still follows traditional rigid rules. They always help each other generously. Owing to its lengthy isolation, the village has had little access to information, including about health issues.

Although the local economy has improved due to potato farming, they are still dominated by local knowledge. There has been little change in their mindset, as shown by the continued existence of taboos and prohibitions for pregnant women. Traditional health practices are still strong, and dominated by the magico-religious model (Ann-Galanti 2008), even today. Traditional health treatment is still widespread. Many local

people choose to go to traditional healers, especially when they believe that their ailments are caused by supernatural forces. In contrast, according to Maliwichi-Nyirendra and Maliwichi (2016) traditional belief and ignorance are also believed to be some of the contributing factors of pregnancy related cases. Among pregnant women in Sigedang it seems that food and behavior taboo is not related to medical effect but could be socially positive, for example not insulting people with disabilities, keeping the kitchen clean etc. Avoiding eggs, catfish for some pregnant women means medically relevant because of allergic factor. Another example is avoiding chili, it could be medically irrelevant for some pregnant women, but people in Sigedang believe that chili is not good for pregnant women because it may cause diarrhoea. In contrast, pregnant women tend to eat cold food, such as vegetables and instant noodles.

In some cases food taboos are result of health considerations or other practical reasons (Maduforo et al. 2013). Local traditions concerning taboos and codes of conduct for pregnant women are well-preserved. They believe that these taboos and codes of conduct are beneficial for pregnant women, since they must be careful with food and behavior. Food taboos include not eating foods that increase body temperature, such as chilies, durians, pineapples, jackfruits, etc. Certain codes of conduct are also found, such as smearing oil on the door. This practice is meant to ease the labor process, as the oil will "grease" the way for the baby. Pregnant women carry *dlingo bingle* when going out, which is expected to ward off the danger and evil spirits. In general, all of these taboos and codes of conduct are intended to promote the safety of the mother and infant. The importance of cleanliness during pregnancy can be seen from the prohibition against going to the landfill; because garbage is considered dirty. When a mother collects it, other family members should bring it to the landfill.

Association and symbolism are apparent in food taboos and codes of conduct. The prohibition against tying knots is associated with labor problems, which will leave them in "knots". Therefore, this prohibition is intended to promote easy labor and avoid becoming tied like a knot. A similar association is evident in the prohibition against killing animals, as symbolized in the visage. If a husband kills an animal without

reason, the child's face will resemble that of the animal.

Taboos and codes of conduct are applied to pregnant women regardless of their social class. It can be seen that primary school graduates are observant of traditions, as they are controlled by others in their environments, such as their mothers, mothers-in-law, husbands, or neighbors. They usually simply follow the local customs because they are afraid of the consequences. Women followed the traditional beliefs (positive motivation) and feared not following the tradition (Agus et al. 2012). Meanwhile, women who graduated from high school and who do not live with their mothers-in-law are usually less obedient, meaning that they sometimes violate the taboos or codes of conduct.

Mothers-in-law have direct power over their daughters-in-law. They are akin to supervisors. In this case, usually pregnant women cannot make decisions for themselves, because their mothers-in-law will intervene. Mothers-in-law will handle matters in their sons' households, especially during a first pregnancy, as mothers-to-be have no experience dealing with pregnancy, labor, or breastfeeding. As told by Mrs. S (39 years old, mother-in-law of R27, years old):

"As long as she stays with me, she has to obey my rules regarding her pregnancy. If she does not stay with me, it is up to her, but as long as she lives here, I will decide for her."

This pretext is used to pressure her daughter-in-law to observe the taboos during pregnancy. In this case, women are agents of cultural preservation, especially related to health traditions regarding pregnancy. Moreover, when supernatural danger is involved, pregnant women are afraid of not obeying the rules. They believe that older people, such as their mothers and mothers-in-law, will provide direct guidance regarding tradition. The experiences of others are also used to prove that something bad will happen when taboos are violated. This condition discourages people from violating taboos and codes of conduct.

Strong beliefs in taboos usually make women unwilling to violate them. The taboo against eating fried rice is simple, but has hidden meaning. Fried rice is usually made from left-over rice, then given chilies and eggs (considered high cholesterol), as well as vegetables such as cabbages that are believed to have bad effect on pregnant women. The hidden spiritual meaning

behind the taboo and prohibition is that a mother, in her pregnancy, should be aware of her speech, thoughts, and actions. If she is not careful, bad things will happen to her or her child. The delivery process will also be affected by mothers' behavior during pregnancy.

Food taboos also include elements of balance inside the human body. It is believed that elements of soil, air, fire, and water may enter a state of imbalance, and illness occurs where heat and cold meet. Taboos are thus preserved to maintain the condition of the body. The body must not be too hot or too cold, and thus food taboos are meant to prevent illness.

Many of the food taboos apply only to women. This implies that, culturally, gender plays a role in food taboos, especially those related to pregnancy and maternity (Bonvillain 1995). Food taboos are not direct factors in stunting, but interference factors, meaning that taboos might lead to undernourishment and this undernourishment might lead to stunting. Although the people in Sigidang believe that stunting is caused by maternal nutrition, they do not disregard the possibility that environmental factors, including socio-cultural factors, might play a role in the health of mothers and children.

CONCLUSION

In the past, Sigidang has had difficulty accessing transportation and information, and as such the community mindset has not changed with economic improvement. The traditional mindset remains strongly held by the local community, especially where it relates to taboos for pregnant women. For them, food taboos and codes of conduct during pregnancy do not affect undernourishment or stunting. However, the food taboos limit the dietary choices of pregnant women, and thus in the long term may affect the diet and health of the fetus. As such, the culture prohibiting pregnant women from consuming certain foods should be abolished in the future, or transformed into another tradition that supports better nutrition intake for pregnant women.

RECOMMENDATIONS

Although there are strong cultural beliefs that lead to food taboos among pregnant women in rural Java, but there is a need to research the food choices that a pregnant woman makes. Another

research is also important to make sure whether food taboos have a significant affect on maternal nutrition or the rates of stunted growth in children. But it is important for local leader, religious leader, local women movement to come up with strategies that will ensure that education related to maternal nutrition should encourage food taboos that do not compromise community health. Education for all including girls, husband, wife, mother-in law and neighborhood about maternal nutrition during pregnancy is important, especially male participation in family health. Multidisciplinary studies are also needed for indepth data not only in the village but also in another remote areas where belief in food taboos exist.

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