

# Knowledge and Decision Making in Food Consumption of Pregnant Women (Case study on Pucakwangi Subdistrict Pati Regency)

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**Abstract**—Pregnancy is a cycle of life which in many communities is considered as a special condition. Therefore, pregnancy is usually prepared and maintained carefully, from the behavior of pregnant women (and some people, including her husband's behavior) to food intake, which aim to keep the mother and the baby healthy until the birth process later. Related to the food intake, the diet of pregnant women are concerned, particularly about food that may or may not be consumed by pregnant women. Pregnant women's diet are not only very closely related to their knowledge of healthy food but also concerned with the availability of healthy food sources. Various knowledge sources about healthy food (from parents, health workers, friends, internet, etc.) are often conflicting one another. This condition makes the pregnant women confused to choose which source to follow. Meanwhile, the availability of food resources is not only associated with food supply, but also related to the access to healthy food. This article aims to explain pregnant women's various sources of knowledge about healthy food for their pregnancy and their decision-making in selecting the healthy foods, associated with the resources and the availability of healthy foods in Pucakwangi sub district, in Pati regency. Descriptive qualitative method is used in this study.

**Keywords**—*decision making; healthy food; knowledge sources; pregnant women*

## I. INTRODUCTION

Pregnancy is a circle of life which in many communities is considered as a special condition. Therefore, pregnancy is usually prepared and maintained carefully, from the behavior of pregnant women (and in some community, it is including her husband's behavior) to food intake, which aim to maintain the mother and the baby healthy until the birth process later.

Related to the food intake, because during pregnancy the fetus depends only on the mother for nutrient and energy supply [1], the food consuming for pregnant women is really important. Being pregnant not only make women more concern about food and health issues [2] but also able to change women's diet behavior [3]. Diet of pregnant women is concerned particularly with food that may or may not be consumed by pregnant women. Many researches focused on pregnant women food

consumption have been done before. Pregnant women are suggested to consume more fiber [4], more protein [5], more iron (Fe) [6], and reduce consuming raw food and vegetables [3],[7]. Food consumption during pregnancy is very important not only for the mother but also for the baby, so that specific food consumption of pregnant women can affect the disease that may be suffered by their baby during childhood [8],[9] or increase risk of certain health problem for their children [10].

There are many factors that influence food consumption of pregnant women such as knowledge, attitude, and beliefs of pregnant women [11],[12],[13], also myths established by society [11],[13]. Knowledge that affects pregnant women consumption is especially knowledge about healthy food (food may or may not be consumed) for their pregnancy. The source of healthy food knowledge is various, starting from midwife, mother, neighbor, friend, and internet. Sometimes there are contradictions between those sources about food that may or may not be consumed by pregnant women. It often makes pregnant women confused which one to be followed. Pregnant women's diet is not only very closely related to their knowledge of healthy food, but also concerned with the availability of healthy food source and other factors. Meanwhile, the availability of food resources is not only associated with food supply, but also related to the access to healthy food.

Aims of this study are explaining pregnant women's various sources of knowledge about healthy food for their pregnancy and their decision making in selecting the healthy food, associated with the resources and availability of healthy food

## II. METHODS

### A. Study Area

This study was conducted in Pucakwangi Subdistrict, Pati Regency. Pucakwangi Subdistrict is a rural area, the majority of which or about 65% of the resident are farmer. More than 70% of the societies have low education level, under basic education.

### B. Subject of Study

The subject of this study is pregnant women in Pucakwangi subdistrict, in Pati regency. This study focus on pregnant women's various sources of knowledge about healthy food for their pregnancy and their decision-making in selecting the healthy foods.

There are 15 main informants with different categories, which are, the experience of pregnancy (8 informants in their first pregnancies and 7 informants in their second or third pregnancies), age of pregnancy (4 informants in their first trimester, 6 informants in their second trimester, and 5 informants in their third trimester), and living pattern (7 informants live with their parents or parents in law, and 8 informants live separately with their parents). The age of the main informant is between 16 until 35 years old. The education level of main informants is from elementary school until senior high school.

There are also 11 supporting informants which are 4 midwives, 6 parents of pregnant women (mother), and one baby shaman.

### C. Methodology

This study uses qualitative method with observation and in-depth interview as collecting data method. An observation was done on pregnant women's behavior in consuming healthy food, also their physical and social environment. Collecting data through observation and in-depth interview took two months long.

## III. RESULTS

### A. The Sources of Healthy Food Knowledge of Pregnant Women

Knowledge of healthy food for pregnant women is related to foods that should be consumed by pregnant women to keep the babies's healthy, as well as foods that should be avoided by pregnant women because of fear of disturbing the health of the baby. There are four sources of knowledge about healthy foods used as references for pregnant women in Pucakwangi subdistrict.

The first source is from the village midwife. Pregnant women get knowledge about healthy food from midwives when they check their pregnancy at the Puskesmas (Primary Health Care Center) or Posyandu (Integrated Care Post). Pregnant women usually get advice or actively ask for advice from midwives about what foods are allowed / good to consume or should be avoided during pregnancy. According to the informant's confession, midwives do not prohibit certain types of food. Basically, food that can be consumed before pregnancy can also be consumed during pregnancy, but indeed there are several types of food suggested by midwives to be consumed by pregnant women. This was revealed by Umi (20 years) and Lia (23 years) as follows:

"The midwife does not prohibit me from eating certain foods. The midwife suggested that I consume all types of food. The foods I usually eat before I get

pregnant can be consumed during my pregnancy." (Ummi)

"When I consulted midwives at the Posyandu, I was given vitamins and advised to consume anything as long as I wanted to eat." (Lia)

Types of food suggested by midwives to be consumed by pregnant women include: foods that contain lots of fiber, protein, vitamins, iron, and folic acid, such as green vegetables, nuts, fresh fruits, meat, fish and milk. Pregnant women are also strongly suggested to consume cooked foods. Midwives do not prohibit certain foods that are considered not good for the baby, such as durian and pineapple, but only to limit the amount of consumption. The reason for the midwives to limit consumption of durian and pineapple is more related to scientific reasons, related to the content of durian and pineapple which are arrow so that if consumed in large quantities can endanger the fetus, it can even lead to miscarriage. Besides giving direct advice, midwives also suggest pregnant women to looking for health information in internet.

The second source is from parent, especially their mother. In addition to midwives, the main source of reference for healthy food knowledge is parents. Parent, in this case the mother, is used as a reference for pregnant women because of their previous experiences when they were pregnant. This experience of parental pregnancy makes pregnant women sometimes trust parents' suggestions more than midwives even though the reasons given by parents are considered to be insufficient or even unreasonable. In contrast to midwives who give flexibility for pregnant women to eat food, parents actually provide a lot of restrictions on pregnant women related to the type of food that can be consumed. In giving advice on what foods are good for the health of pregnant women, parents do not give advice regarding the nutritional content of food, but directly point out what kind of foods that should be consumed by pregnant women. Just like midwives, parents also advise pregnant women to eat green vegetables, fruits, meat, fish, and cooked foods. Although advice from parents is much the same as the advice given by midwives, not infrequently the advice given by parents is on contrary to the advice of the midwife. Sometimes there is a type of food recommended by midwives for consumption, but it is prohibited by parents. One of them is salak (snake fruit). Midwives encourage pregnant women to consume salak because it contains folic acid which is good for the fetus, but parents forbid with reasons that are more related to the myths that develop in the Pucakwangi Village community. According to parents, if pregnant women consume zalacca, their children will be born with scaly skin like bark. Some other foods that are prohibited by parents for consumption by pregnant women are also more mythical than rational reasons. In addition to salak, foods that are prohibited from being consumed according to the myth of the inhabitants of Pucakwangi Village are dates, siwalan, gold fish, squid, shrimp, shellfish, rambutan, mushrooms, creeping cassava leaves, eels, crabs and catfish. If pregnant women eat foods that are prohibited, it will result in physical imperfection of the

baby (such as dates, siwalan, gold fish, squid, shrimp, shellfish, rambutan), inhibit the development of the baby (such as fungi and cassava leaves), or behavior children later (eels, crabs, catfish). Dates should not be eaten, because it is feared that a child born will have an itchy pus. Gold fish and shellfish should not be eaten because if eaten by the skin the child will be scaly yellow like a golden fish, or hard like a clam. Siwalan should not be consumed because it will make the child's head soft. Eating squid will make the baby born disabled, small legs. Mushrooms will make their children shrink after birth, while rambutan will cause their children to be born without hair. Eating mushrooms will make the child shrink after birth, while the leaves of sweet potatoes will make it difficult for children to walk (walk while holding on to objects as backs). Eel consumption is believed to make babies born become children who are 'slippery' like eels, so that makes parents have difficulty controlling children's behavior; catfish and crabs will make children become naughty, like to stick like catfish or pinch like crabs.

The next source of knowledge about healthy food is the internet. The progress of information technology now enables pregnant women in Pucakwangi Village to look for various information about pregnancy, including foods that are good for pregnant women and fetuses. Although not all pregnant women in Pucakwangi Village can access the internet because of limited telephone equipment, many of them have used the internet to find various informations about pregnancy. Information obtained by pregnant women regarding healthy or unhealthy food for pregnant women from the internet, according to informants, is more similar to what midwives suggest compared to what parents suggest. Even according to the informant, information from the internet is far more complete and detailed than information from midwives, as Lia (23 years) said below:

"I have read on the internet about vegetables that are good for pregnant women are dark green vegetables that are still fresh and freshly picked, nuts, fruits such as mangoes, apples, avocados. As far as I know all food that has benefits and content that is good for pregnant women. While fish that are good for pregnant women are like milkfish, pindang (smoked fish), tilapia. That was what I read yesterday from the internet."

Unlike Lia and other informants who also used the internet to find information about healthy food, Yola (18) claimed to have never sought information on the internet, because her cellphone could not be used to access the internet. During this time Yola only received information about healthy food from midwives and her parent (mother).

The other source of knowledge about healthy food is from friends or neighbors. Social relations are also used by pregnant women in Pucakwangi Village to find information about healthy food. One of the informants who got information from friends was Umi (20 years):

"My friend usually tells me about her pregnancy experience, eating lots of vegetables, eating lots of papaya fruit, that's all."

In addition to friends, neighbors are also used as an additional source to find information about healthy food. The neighbors or friends who became information references for pregnant women in Pucakwangi Village were friends and neighbors who had been pregnant before. Information obtained is more about sharing experiences during their pregnancy, both related to healthy food and their pregnancy experience.

#### *B. Pregnant Women's Decision Making in Food Consuming*

There are several considerations made by pregnant women in Pucakwangi Village in making decisions about what foods to consume. Some of these considerations are trust in the source of information, week of pregnancy, and economic ability. These considerations are interrelated and support each other.

Trust in information sources is a major consideration in food consumption decision making processes. In Pucakwangi Village the role of parents in making food consumption decisions for pregnant women is still very strong. This is mainly due to the support of myths that develop in the community regarding various dietary restrictions for pregnant women. Advice from parents is a representation of the culture of the local community. Parents are also one of the agents who continue to maintain and perpetuate these myths. Many of the informants still live with their parents or in-laws, so the interaction of pregnant women and parents is more intensive. The strong myths that develop in this society is one of the considerations for pregnant women to consume food, as revealed by informant Dewi (21 years) and Rohmah (20 years), as follows:

"I followed the advice of my parents, we live with parents. Midwives know everything, but the parents know better, so I prefer to follow the advice of parents." (Dewi)

"I am closer to my parents. If there is food that is taboo in the community, I ask the midwife whether or not to consume it. If the midwife says it is permissible, I try to give understanding to parents. But if parents still don't allow it, I follow the parents' advice, not eating." (Rohmah)

Another consideration for pregnant women is to follow the advice of parents because pregnant women do not want to conflict with parents if they do not follow parental advice. Pregnant women also feel worried if they violate parental restrictions, it will have a bad effect on their fetus. One of them was revealed by Lia (23 years):

"Actually, mustard is also good for the beginning of pregnancy, but the parent's word should not be because mustard is hot, it can endanger the fetus. But according to the information I read on the internet, mustard contains protein. Even though I know it's good, I don't dare to eat. Later if there is anything with my content, I can get angry. The problem is this is the first child. This is a child's problem, so I don't want to play games. If you want to eat something, you have to think about it before you get it. I am afraid something will happen later if I don't obey my parents."

What was revealed by Rohmah and Lia shows that even though the source of information for pregnant women is quite diverse, it turns out that parents are still the main reference for healthy food information for pregnant women. Consideration of pregnant women to follow the advice of parents more than midwives or the internet does not mean that pregnant women still believe in the myths that develop in the community of Pucakwangi Village. Actually, pregnant women are not too trusting myths. Consideration of pregnant women following parental recommendations is more a form of their respect for parents, as expressed by Dewi (21 years), Umi (20 years), and Rohmah (20 years) below:

"What parents say (which comes from myths), I believe, but yes, just trusting, I'm afraid of my mother." (Dewi)

"Actually, like the example of salak, the midwife recommends that I consume salak, because salak contains high folic acid, but parents forbid. Parents say if I eat zalacca, then the baby's skin will be scaly. But I don't believe it. Yes, we live with parents. The myth has also been trusted and no one dares to break it. So yes I also followed it." (Umi)

"For example, eating mushrooms. Parents forbid me to eat, while midwives allow. The midwife says it's okay to eat mushrooms. So if I want to eat mushrooms, I just eat very little, in order to respect parental prohibitions, because if I don't obey my parent, she can be angry. So there is nothing else I can do." (Rohmah)

Even though there are still many pregnant women in Pucakwangi Village who follow the advice of their parents more, there are some informants who trust and follow the advice of the midwife. According to them, midwives provide more trusted information than parents, as expressed by Diah (22 years) and Miftahul (35 years):

"If the midwife recommends to consume something but the parents forbid it, in my opinion the advice of midwife is more trusted than the parents have, then I follow the midwife." (Diah)

"I prefer to follow advice from midwives, because midwives know more about how to maintain good health, while advice from parents sometimes makes no sense, so I rarely follow it." (Miftahul)

Even though Diah trusted the midwife's advice more than the parents, but to avoid conflict because it violated the advice of the parents, Diah consumed food secretly. This was done by Diah because she was still living with her parents. What was done by Diah was also done by Susi (23 years) who also still lives with her parents:

"I still eat food that is abstinence, but in a little amount and without my parents' permission. If parents caught me, I have to explain it carefully."

Unlike Diah and Susi who still lived with their parents, Miftahul was more free to follow the advice of the midwife because she had lived separately from her parents. Moreover, this pregnancy is not the first, so the experience of previous pregnancies made Miftahul more prepared and relaxed in facing this pregnancy.

The informant's explanations above show that pregnant women in Pucakwangi Village still highly

respect the beliefs / myths of parents and the local community.

In addition to considering trust in the source of information and consideration of respecting parents, pregnant women in Pucakwangi Village also consider week of pregnancy. Pregnant women in first trimester are more careful to prefer food consumption, they limit their consumption especially foods that are considered bad for the fetus. Pregnant women believe that pregnancy in the first trimester is still very weak and prone to miscarriage, so they are much more careful and pay close attention to the food they consume. Pregnant women do not dare to consume foods that are prohibited or recommended to be restricted, both from parents and midwives. While pregnant women who have entered safer pregnancy (second and third trimesters), have been more relaxed in choosing food consumption.

Pucakwangi village is a village where the majority of the population works in the agricultural sector, so the socio-economic conditions are low. This economic condition is also one of the considerations for pregnant women to eat healthy foods. With limited family income, pregnant women in Pucakwangi Village are forced to be very clever in their strategies and the needs of the fetus are fully fulfilled, as revealed by Umi, Lia and Dewi below:

"Healthy foods are foods that contain vitamins, such as fruit, vegetables, lean fat. But meat is expensive, so I'm looking for a cheap one, the important thing is to stay nutritious." (Dewi)

"If I buy fruit, look for cheap ones, like papaya, both to prevent hemorrhoid during childbirth." (Lia)

"I rarely eat fruit. If there is money, I buy fruit, but if there is no money, don't eat fruit, the important thing is to fill up." (Dewi)

Based on the explanation above, the cultural, physiological and economic factors are considered by pregnant women to eat healthy foods.

#### IV. CONCLUSIONS

There are various knowledge sources about healthy food for pregnant women in Pucakwangi sub district, based on scientific knowledge, community myth, and pregnancy experience of other women. Economic factor influence in the ability to provide the variety of healthy food. However, decision making for pregnant women in consuming healthy foods is more influenced by cultural factors, which respect for parents is still the main consideration.

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