

Nutrition Knowledge During Pregnancy in Malnutrition Pregnancy Women in Bandar Lampung City: A Qualitative Study

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Abstract: The prevalence of malnutrition among pregnant women in Indonesia is quite high (17.3%). Knowledge of good nutrition during pregnancy will shape the eating behavior of pregnant women so that they have adequate food intake according to their needs and can prevent pregnant women from experiencing malnutrition. The purpose of this study is to explore nutrition knowledge during pregnancy in pregnant women who experience malnutrition in the city of Bandar Lampung. This research is a qualitative study with a phenomenological approach that was conducted in the city of Bandar Lampung from June 2019 to February 2020. The informants were 27 pregnant women who had an upper arm circumference <23.5 cm. Data collection was carried out through in-depth interviews. Most of the informants were aged 20-35 years (70.38%) and were multiparous (77.77%). Poor knowledge of nutrition during pregnancy consists of four themes, that were lack of information about the impact of drinking tea during meals, allocation of income for fulfilling nutrition, the impact of malnutrition on pregnancy, and information on nutrition during pregnancy. It is necessary to carry out periodic counseling and assistance for pregnant women, especially regarding nutrition during pregnancy to prevent maternal and child morbidity.

1 INTRODUCTION

One of the nutritional problems in Indonesia that has a high prevalence is malnutrition in pregnant women. The results of the 2013 Basic Health Research (Riskesdas) show that in Indonesia, the prevalence of malnutrition in pregnant women aged 15-49 years has reached 24.2%, and has decreased by 17.3% in 2018. This prevalence is still classified in the problem severe category of public health by the world health organization (WHO) (Ministry of Health Republic of Indonesia, 2013; Ministry of Health Republic of Indonesia, 2018).

Malnutrition in pregnancy is a problem that occurs during pregnancy where there is an imbalance between intake and nutritional needs. Malnutrition in pregnancy is known by measuring the mid-upper arm circumference (MUAC) of pregnant women which is less than 23.5 cm or on the MUAC red band (Kpewou et al., 2020). One of the effects of maternal malnutrition is low birth weight (LBW) babies below 2500 grams (Arsyi & Besral, 2021).

Lack of food intake is the main risk factor for malnutrition in pregnant women. The results of Indonesian Nutrition Consumption Monitoring which was carried out in conjunction with the collection of nutrition status assessment data in 2016 showed that only 26.3% of pregnant women met sufficient energy and 29.3% of pregnant women met sufficient protein in their daily consumption (Ministry of Health Republic of Indonesia, 2016).

One of the factors that cause pregnant women to experience malnutrition is the lack of knowledge of pregnant women in determining good nutrition during pregnancy. Nutritional intake in pregnant women should contain energy, protein, vitamins, minerals, folic acid, iron, and calcium which is very much needed in the process of fetal development (Marshall et al., 2022). Nutritional status during pregnancy greatly influences the birth process of the baby later. Mothers with malnutrition can increase the risk of miscarriage, perinatal death (death of the fetus at 22 weeks gestation to 1 week after birth), and neonatal (babies aged 0-28 days) (Lassi et al., 2021).

Research conducted on pregnant women in the Sungai Durian Health Center work area, Sintang, West Kalimantan, Indonesia found that lack of knowledge is related to the risk of malnutrition in pregnancy, and 61.5% of malnourished pregnant women have poor nutritional knowledge (Sinta, 2022). Other research on pregnant women in the working area of the Batudaa Pantai Health Center, Gorontalo, Indonesia also obtained knowledge that was less related to malnutrition in pregnancy, and 94.1% of malnourished pregnant women had poor knowledge (Retni & Puluhalawa, 2021).

The high level of knowledge that is lacking in malnourished pregnant women needs to be investigated in more depth regarding what knowledge is wrong or not good so that this will later become the basis for conducting nutritional knowledge interventions for pregnant women so that the nutritional needs of pregnancy are met and preventing malnutrition in pregnancy.

2 SUBJECT AND METHOD

This research is qualitative exploratory research with a phenomenological approach. In qualitative research using descriptive phenomenological methods, researchers try to explore meaning and meaning and try to explore nutrition knowledge during pregnancy in pregnant women who experience malnutrition. This research was conducted in Bandar Lampung City, Indonesia, from June 2019 to February 2020. The target population for this study was all pregnant women in Lampung Province. The case population in this study were all malnourished pregnant women. The inclusion criteria for this research informant were having a mid-upper arm circumference <23.5 cm (malnutrition).

Determination of samples/informants using purposive sampling based on inclusion and exclusion criteria. The number of samples is determined if the data taken is saturated, that is as many as 27 malnourished pregnant women. The instrument used was a qualitative research instrument, namely an in-depth interview guide containing questions used in data collection, field notes, and recording devices. The data collection process in this study was carried out by in-depth interviews with participants/informants, that is malnourished pregnant women. Data analysis is carried out simultaneously with the process of collecting data, making interpretations, and writing reports. Data validity is done by triangulation and member checking. Data triangulation was carried out using source

triangulation techniques (nutrition workers, midwives, and doctors; that working at a community health center) and theory.

3 RESULTS

The results showed that low knowledge of nutrition during pregnancy consisted of four themes, which were lack of information about the impact of drinking tea during meals, allocation of income for fulfilling nutrition, the impact of malnutrition in pregnancy, and information on nutrition during pregnancy.

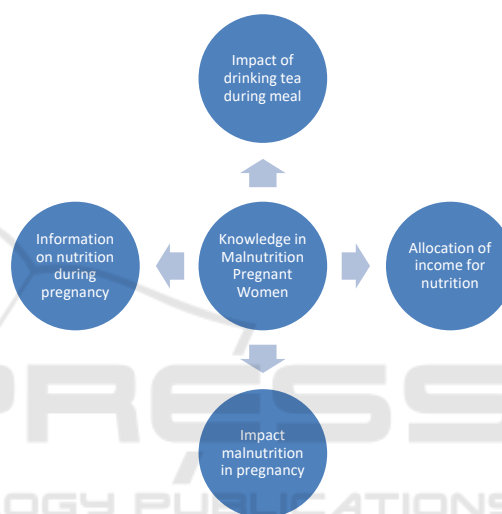


Figure 1: The Themes of Knowledge in Malnutrition of Pregnant Women.

3.1 Knowledge About the Impact of Drinking Tea During a Meal

The results of this research found that informants (malnourished pregnant women) did not know the impact of the habit of drinking tea together with eating staple foods on health, which is a risk factor for anemia in pregnancy. Informants stated that they had never received this information from health workers or from reading or hearing this information from other people.

The informants stated that the reason they drank tea along with eating rice was because of their habit, and drinking can reduce the symptoms of nausea and vomiting, and make the stomach feel warmer and more comfortable so that pregnant women can eat more. Quote from the informant's statement as stated below:

"..... I don't know. I have never been informed that it is not permissible to drink tea while meal ..."

"..... I don't know if that's possible, I drink tea because it can reduce nausea, so when I eat I drink hot tea. To be able to eat too because during pregnancy it becomes difficult to eat"

"..... I don't know, I was never informed by the midwife or others, so I drank hot tea at breakfast so that it reduced nausea and I could eat more....."

".... I do not know and have never been told or read that it is not permissible to drink tea while a meal. I eat rice and drink hot tea, so I can eat because the stomach gets warm and reduces nausea too..."

The results of interviews with informants from health workers (midwives, nutritionists, doctors) found that health workers did not pay attention to the habit of drinking pregnant women's tea together when meal so that which is a risk of anemia. Health workers stated that pregnant women who suffer from anemia are caused by insufficient food intake and also low socioeconomic conditions.

Health workers stated that they only focused on giving blood supplement tablets and education on food intake, but had not included nutritional education regarding food enhancers and inhibitors (inhibits) absorption of Fe. Quotations of health workers' statements as stated below:

"..... all this time we have focused more on blood supplement tablets, so the habit of drinking tea has been forgotten....."

"..... it was not noticed because there are already the blood supplement tablets"

"..... because there are blood supplement tablets and nutrition education, so the habit of drinking tea is not asked about....."

"... the problem hasn't been explored yet, because there is already an iron deficiency test and usually those who are anemic eat less and have a low figure"

3.2 Knowledge About the Allocation of Income for Fulfilling Nutrition

The results of interviews with malnourished pregnant women informants found that knowledge regarding the perception of the proportion of family income to meet family nutrition was lacking. Informants stated that 20-40% of the total family income was used to buy food to meet the nutritional needs of the family. According to the informant, the proportion of income for spending on family food is sufficient, although

sometimes they can only buy vegetables and tempeh or tofu.

Informants stated that it is difficult to increase the proportion of income to fulfill family nutrition, because considering that there are still many other necessities to meet family life needs, such as schooling for children, capital for trading, or preparation for giving birth. Quote from the informant's statement as stated below:

"..... I spend 10 thousand or 15 thousand (out of a total income of 50 thousand per day), I think that's enough...."

"..... Not sure... 20-25 thousand for food a day (out of a total income of 60 thousand per day), in my opinion, that is enough because there are other expenses...."

"..... I think about 20-30% is enough....."

"..... approximately a day is around 30 thousand (2 million monthly income)....."

The results of interviews with informants from health workers (midwives, nutritionists, doctors) found that pregnant women's knowledge regarding the proportion of income to fulfill family nutrition is not good. This is because pregnant women do not know the actual standard, what percentage should be the proportion of income to meet the nutritional needs of the family. The proportion of family income is also mostly used for other purposes, for example for school children, trading capital, medical expenses, gas money, and so on.

Health workers also stated that the total income of families of malnourished pregnant women was indeed not large, because most of the malnourished pregnant women came from families with middle to lower socioeconomic status. According to health workers, the most important thing is that the family of pregnant women can eat 3 times a day, even with simple side dishes or vegetables. Quotations of health workers' statements as stated below:

".....pregnant women don't know, they spend for food around 30% of the total family income for. They have many necessities of life to fulfill, most of them come from families with middle to lower socioeconomic levels... "

"....they are not sure how much they spend on food, maybe around 25-30%, they don't know how much should be, the important thing is enough to feed their family.. not to mention the many other needs."

"..... it seems they don't know how much they should spend on food, they spend according to the finances they have, and it is also divided with other needs which are also many... I think maybe around 30% of

their income is spent on buying food, also shared with other needs, for example, school fees and other household expenses.....”

Based on the results of interviews with malnourished pregnant women informants and triangulation with health workers, it was found that the proportion of income for fulfilling maternal nutrition in the pregnant women group was still lacking/ below the recommended standard. The proportion of family income for nutrition fulfillment in the group of malnourished pregnant women ranges from 20-40%.

The proportion of inadequate family nutrition fulfillment can have an impact on pregnant women's food intake both in quantity and quality. The low proportion of fulfillment of nutrition from the amount of family income is caused by many other needs that must be met, large family members, and so on.

3.3 Knowledge About the Impact of Malnutrition on Pregnancy

The results of this research state that knowledge about the impact of malnutrition on pregnancy is still lacking. Informants of malnourished pregnant women stated that the effects of malnutrition were disorders or illnesses during pregnancy, complications during childbirth, and babies born underweight/abnormal. Disorders or illnesses during pregnancy such as being weak and not strong or having enough energy when giving birth. Complications during childbirth such as suffering from anemia there is a risk of experiencing bleeding during childbirth, and also giving birth with prolonged labor or late labor. Quote from the informant's statement as stated below:

"..... later become weak and not strong when giving birth....."

"..... information from the midwife that if you are thin then it will be difficult when you give birth and the baby will be small because you are underweight"

".....The baby will have a low weight....."

".....It can be difficult during labor and the baby is small due to the lack of weight"

"..... will have difficulties during pregnancy, can become anemic, there are complications during delivery so that it cannot give birth normally"

The results of interviews with health worker informants found that pregnant women's knowledge about the impact of malnutrition on pregnancy was still lacking. Health workers stated that pregnant

women were informed of the effects of malnutrition when pregnant women visited antenatal care (ANC).

The impact malnutrition that is informed to pregnant women is a disorder or disease during pregnancy and becomes a complication during childbirth. Health workers stated that even though they had been informed, it was very difficult for pregnant women to change their behavior related to food intake and anemia which are direct factors causing malnutrition in pregnancy. Quotations of health workers' statements as stated below:

"..... they already know because they were often informed during ANC, but sometimes when asked again the answer was when the birth was difficult and had to be operated on, if asked further they don't understand"

"..... if their answers when asked are usually the answer will be experiencing difficulties during childbirth and the body becomes weak, they don't know the details. Even though they are always reminded of malnutrition when pregnant"

".....we always inform pregnant women what are the dangers of malnutrition during pregnancy, and when asked again the answer is that they will often get sick during pregnancy and experience difficulties during childbirth. They don't understand..."

3.4 Knowledge About the Information on Nutrition During Pregnancy

The research results found that knowledge regarding nutrition and health information during pregnancy is still not good. Informants of malnourished pregnant women stated that the information they got during pregnancy was regarding the schedule of antenatal care (ANC) visits, food intake according to the needs during pregnancy, consumption of vitamins, attending classes for pregnant women, giving biscuits giving additional recovery food.

This information was obtained from midwives, doctors, and nutrition officers at the Community Health Center. Access to information is also easy to obtain. Excerpts from malnourished pregnant women's informants as stated below:

"..... usually information about control schedules, exercise for pregnant women, vitamins, and given biscuits, from the midwife and nutrition officer. Information is easy to get"

"..... Midwives often provide information, once also doctors then nutritionists. The information provided is about food that must be eaten, before that I had anemia and because of that I was kept informed to take the medicine regularly, then ANC information to

the health center, and others. Information is easy to get, in fact, sometimes the midwives always remind me..."

"..... usually informed about control schedules, vitamins, nutritious food, exercise, and others. Information from midwives and easy to get"

"..... information on food during pregnancy, control schedule, taking vitamins, eating biscuits. Informed the same midwives and nutritionist. Access to information is not difficult or not and even always reminded"

The results of interviews with health worker informants found that pregnant women's knowledge of nutrition and health information during pregnancy was not good. The information provided, namely regarding the schedule of antenatal care (ANC) visits, food intake, consumption of vitamins, classes of pregnant women, and weight gain during pregnancy, is still lacking. Health workers stated that all this information was always given when pregnant women came to ANC or via telephone, SMS, and WhatsApp, but indeed most pregnant women still did not understand it, especially related to factors that are risk factors for malnutrition. Quotations of health workers' statements as stated below:

"..... All information about the ANC schedule, signs of illness, nutritional needs during pregnancy, and others is always given, but when asked again some people don't know or forget. This may be due to young age, lack of knowledge, and low education. We also always inform via sms or Whatsapp or even by telephone..." *"..... Pregnant women are always informed about weight gain during pregnancy, healthy and nutritious food during pregnancy, ANC schedule, etc. If asked again, some of them still don't know even though they have been told many times, sometimes we also discuss it in the WhatsApp group"*

"..... Every ANC is always informed about control schedules, taking vitamins, nutrition, health checks, etc. We are also always available if asked by telephone or sms"

4 DISCUSSION

Knowledge is the result of knowing and occurs after people sense a certain object. Knowledge is a function of human attitudes that have a basic urge to know, seek reasoning, and any experiences. Knowledge of nutrition will help in finding various alternative solutions to the problem of family nutritional conditions. Behavior-based knowledge will be better

than not based-on knowledge because it is very important to shape one's actions (Adhiyati, 2013). Inadequate food intake can be caused by a person's low knowledge and eating behavior. Low nutritional knowledge can lead to low food selection and have a role in nutritional problems (Zychowicz & Plichta, 2022).

Pregnant women's knowledge about nutrition and health during pregnancy is influenced by the level of education of pregnant women. Knowledge of good nutrition during pregnancy will shape the eating behavior of pregnant women so that they have adequate food intake according to their needs (Mohammadi et al., 2022).

Education level is related to food intake. Low education level tends to have low nutritional knowledge, low food intake (including protein), and poor nutritional status. Women with low levels of education tend to have a higher probability of having less food intake and suffering from malnutrition. Women with higher levels of education have better food consumption patterns than women with lower education (Mulyadi, 2021). Education level is the strongest factor that correlates with nutritional intake in pregnant women. Pregnant women who have a high level of education have a positive correlation with nutrient intake, both macronutrients (carbohydrates, protein, and fat) and micronutrients (vitamins and minerals) (Mutalazimah, Wijaya & Suswardany, 2020).

According to Adhiyati (2013), inadequate food intake can be caused by a person's low knowledge and eating behavior. Low nutritional knowledge can lead to low food choices and have a role in nutritional problems.

According to Stephanie and Kartika (2014), a mother's low education can affect the risk of malnutrition, this is because the education factor can determine whether or not it is easy for a person to absorb and understand the nutritional knowledge obtained and influence one's eating patterns.

According to Muliawati (2012). the formal education of housewives often has a positive relationship with the development of consumption patterns in the family. Education will affect a mother's knowledge, especially related to health. Mothers who have good nutritional knowledge will choose foods that are more nutritious than those that are less nutritious.

On average, pregnant women whose food intake is insufficient due to unbalanced menu preparation and lack of knowledge of pregnant women in paying attention to fulfilling their food (Lugowska & Kolanowski, 2019).

Informants had insufficient knowledge about tea drinking as a risk factor for nutritional anemia in pregnancy. The results of in-depth interviews with health workers also stated that health workers did not provide information about the risks of drinking tea as a cause of anemia in pregnancy, because health workers focused more on the prevention and management of anemia on the blood supplement tablet program.

The role of health workers in providing education to pregnant women is very important in increasing knowledge and forming healthy behavior, including behavior in preventing anemia in pregnancy. The health behavior of a person or society is influenced by knowledge and attitudes. Good knowledge and a positive attitude can support the behavior of pregnant women in making efforts to prevent anemia. Education about the prevention of anemia is one effort that can increase knowledge and change attitudes to be positive so that in the end pregnant women can make various efforts to prevent anemia (Sukmawati, Mamuroh, & Nurhakim, 2019).

Based on the results of in-depth interviews with pregnant women informants, it was found that knowledge about the effects of malnutrition was still lacking. Informants only know that the impact of malnutrition on pregnancy will cause disturbances during pregnancy, become complications during childbirth and give birth to babies with underweight.

The impact of malnutrition in pregnancy is divided into 3, there were causing problems for the mother, childbirth, and the fetus. Undernourishment in pregnant women will increase the risk of complications in the mother during pregnancy, namely anemia, bleeding, the mother's weight does not increase normally and contracting infectious diseases (Karemoi et al., 2020). The effect of malnutrition on the birth process can result in difficult and long labor, preterm or premature delivery, bleeding after delivery, and increases risk of operative delivery. Malnutrition in pregnant women can affect the growth process of the fetus, cause miscarriage and, the fetus dies in the womb and is born with a low birth weight (Zulhaida, 2013).

Based on the results of in-depth interviews with pregnant women informants, it was found that knowledge about nutritional information was still lacking. Although in general, the informants stated that they received information about ANC visit schedules, food intake, vitamin consumption, class schedules for pregnant women, and weight gain each month; informants still do not fully understand the amount, type, and frequency of food that must be

consumed during pregnancy, resulting in insufficient food intake.

Informants still had insufficient knowledge regarding the proportion of family income to meet family nutrition, which ranged from 20-40% in families of malnourished pregnant women. Insufficient knowledge of the informants in this study regarding the proportion of income to meet family nutrition was influenced by the educational level of the informants. Informants of malnourished pregnant women in this qualitative study mostly had insufficient knowledge (78%) and basic education level (65%). According to Notoatmodjo (2012), perceptions can be changed by increasing knowledge.

According to Ernest Engel, the percentage of spending on food will decrease as income increases. Therefore, the composition of household expenditure can be used as an indicator of the welfare of the population. The lower the percentage of spending on food to total expenditure, the better the economic level of the population. Based on the results of Purwaningsih's research (2008) the average proportion of food expenditure is at least 60% to ensure household food security is included in the non-food insecure category. Rosyadi & Purnomo (2012) in their research stated that the proportion (share) of household expenditure for food needs was much higher than household expenditure for non-food needs, namely an average of 78% for food needs, while 22% for non-food needs.

5 CONCLUSIONS

Lack of knowledge about nutrition during pregnancy is a risk factor for malnutrition in pregnancy so it can increase maternal and child morbidity. It is necessary to carry out periodic counseling and assistance for pregnant women, especially regarding nutrition during pregnancy.

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