PREGNANT WOMEN'S NUTRITIONAL STATUS

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Abstract

The research was based on pregnant women who experienced malnutrition in the PHC of Tamansari, Tasikmalaya. Malnutrition on pregnant women causes interference to maternal and fetal health. Malnutrition can be anticipated by conducting screening in pregnant women so that it can be immediately identified and immediately addressed. This study aimed to identify the nutritional status based on upper arm circumference, BMI, and body weight gain based on BMI. The type of research was a quantitative descriptive. The sampling technique used stratified random sampling, the number of samples were 89 people. The study was conducted in the area of Tamansari PHC Data collection used weight scales, microtome stature meter, upper arm circumference, and body weight before pregnancy was taken secondary from the MCH book. The results showed that majority of the respondents based on upper arm circumference were 66 people (74.2%) who did not experience malnutrition, based on BMI 49 people (55.1%) were normal, and based on body weight, 43 respondents (48.3%) were categorized as overweight according to gestational age. This research can be used as a basis for health promotion information regarding the nutritional status and further research needs to be done related to the impact of malnutrition and excess nutrition.
Keywords: Pregnancy, malnutrition, nutritional status.

INTRODUCTION

World Health Organization (WHO) estimated 80% of maternal mortality was caused by direct causes including bleeding, infection, eclampsia, prolonged labor, and abortion as well as 20% of indirect causes including poor nutritional status, anemia, malaria, and heart disease (Bedagai, 2018). The maternal mortality rate (MMR) in Indonesia in 2015 was 305 per 100,000 live births. The figure is under the target of Sustainable Development Goals (SDG's) in 2030 which is reducing maternal mortality to less than 70 per 100,000 live birth. According to the results of SDKI research in 2012 found that the national MMR in West Java showed an enormous increase. Meanwhile, the number of MMR in West Priangan was 319.88 from the total number of births 150,002 (Dinkes Tasikmalaya, 2016).

Muliawati (2013) said that the cause of maternal death is closely related to the lack of nutritional intake and bleeding. Bleeding is one of the consequences of iron deficiency and exfoliation, while exfoliation caused by hypertension, which also related to nutritional intake. Pregnant women who have a lack of nutritional intake will give birth the babies with a low birth weight (LBW). A pregnant woman will give birth to a healthy baby, as gestational age with normal body weight when the level of health and nutrition is in good condition. Thus, the quality

of babies born depends on the nutritional condition of mothers before and during pregnancy (Waryana,2010).

Nutritional status can be measured using the Anthropometry method by assessing the upper arm circumference, the Body Mass Index (BMI) by measuring the height and pre-pregnancy weight, and the increase in weight during pregnancy (Dewa, 2014). Research conducted in India obtained that the upper arm circumference relatively stable or only minor changes during the period of pregnancy, and the measurement is independent toward the gestational age. Therefore, upper arm circumference can only be used for screening. Screening is useful in assessing nutrition status and health programs such as determining pregnant women who need to obtain additional food (Shah, 2001 in Hidayati, 2011). The research which was conducted by Erika in Yongki (2012) in Vietnam concluded that women who had a pregnancy weight gain < 10 kg, generally have a risk of childbirth with LBW (Ningrum & Cahyaningrum, 2018).

Data of pregnant women with chronic energy deficiency from Health office Tasikmalaya in 2018, showed that the number of pregnant women in Tasikmalaya city was 12,648 people, and the number of pregnant women with chronic energy deficiency was 836 or 6.6% of the total pregnant women. The PHC of Tamansari is part of the Tasikmalaya Health Office. It was the second-ranked of nutritional problems in pregnancy with the number of pregnant women upper arm circumference < 23.5 cm or less chronic energy (malnutrition) was 68 out of 758 pregnancy or 8.9% of the number of pregnant women (Health Office Tasikmalaya, 2018). However, no detailed data related to all nutritional indicators including BMI and the upper arm circumference. The study aimed to identify the nutritional status of pregnant women based on upper arm circumference, BMT, and weight gain during pregnancy.

METHODS

This quantitative descriptive study was conducted to identify the nutritional status of pregnant women based on upper arm circumference, BMI, and weight gain during pregnancy. The nutritional status of pregnant women is categorized as Underweight (protein-calorie malnutrition) if the upper arm circumference less than < 23,5 cm and not PCM if the upper arm circumference more than > 23,5 cm. The categories of the status of pregnant women based on BMI were underweight if BMI <18.5, Normal with BMI 18.5 - 25, Overweight with BMI> 25-

29, and Obesity with BMI> 29. The category of nutritional status based on weight gain was Underweight when weight gain was less than gestational age, Normal when weight gain as the gestational age, and Overweight when the weight gain was more than gestational age. The sampling technique was stratified random sampling and purposive sampling. The sample size was 80 people. The study was conducted in the Tamansari PHC for 4 months. Respondent data were taken from the register of the village midwife record. Retrieval of data was assisted by the students who have been given training on weighing, height, and upper arm circumference measurement procedures as well as data from Maternal-Children Health Record. Data collection tools were the weight scales, microtome stature meter, and measuring tape. Weight before pregnancy was from the MCH record. The data analysis method was univariate analysis, namely the distribution of frequencies and percentages. This study protocol was approved by the Ethical Review Board of STIKes BTH Tasikmalaya with certificate No. KEPK STIKes BTH No. 18 / kepk-bth / 02/2019.

RESULTS

1. Nutritional Status of pregnant women based on the upper arm circumference

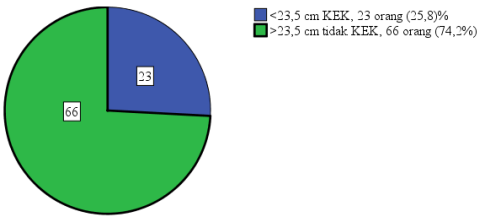

Diagram 1 Nutritional Status of pregnant women based on upper arm circumference

Diagram 1 shows that the nutritional status of pregnant women based on the upper arm circumference, the result showed that most respondents (66 pregnant women or 74.2%) had normal PCM and a small portion of them were categorized malnutrition 23 people pregnant women or 25%.

2. Nutritional Status of pregnant women based on BMI

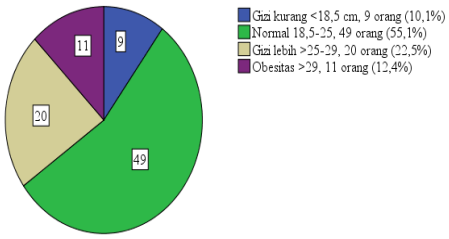

Diagram 2 Nutritional Status of pregnant women based on BMI

Diagram 2 shows that the nutritional status of pregnant women based on BMI. The most of respondents as many as 49 people (55.1%) had a normal BMI, 20 people (22.5%) had more nutrition, 11 people (12.4%) were obese, and 9 people (10.1%) were malnutrition.

3. Nutritional Status of pregnant women based on weight gain during pregnancy

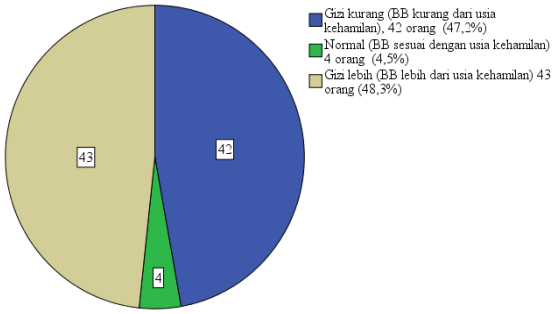

Diagram 3 Nutritional Status of pregnant women based on weight gain in pregnancy according to gestational age

Diagram 3 shows that the percentage of respondents who had more nutrition and less nutrition were slight differences with 43 respondents (48.3%) had more nutrients and 42 respondents (47.2%) had less nutrition, and only 4 people (4.5%) had a normal category.

DISCUSSION

The pregnant women's nutritional status based on upper arm circumferences

The results of the study show that most respondents (66 pregnant women or 74.2%) had normal PCM. According to Indonesia Health Ministry in Dewa N, (2014), based on upper arm

circumference measurements there are 2 categories: pregnant women with malnutrition <23,5 cm and normal >23.5 cm. Several factors affect pregnant women's arm circumference one of which is nutrient intake. The quality of babies born depends on the nutritional status of the mother before and during pregnancy (Waryana, 2010). There are several factors influence the nutritional status including nutritional intake, the level of knowledge on good nutrition, and nutritional status before pregnancy. The Indonesia Health Ministry (2010), states that healthy mothers will give birth the healthy babies. They also state that a mother's nutrition during pregnancy is one of the determining factors that affect infants. The fetus grows by taking nutrients from the food consumed by his mother and from nutrient deposits in her mother's body. Therefore, mothers should increase the amount and type of food to meet the needs of fetal growth, maternal needs, and to produce breast milk. Mothers must have good nutritional status before conceiving and consume good food (Kemenkes RI, 2014).

Pregnant women whose nutritional intake is less than the indicators of normal nutrition, their nutritional needs were unmeet, so she may have an opportunity on less nutritional status. the habit of eating, pregnant women's food needs 3 times more than before. Less nutritional intake has an impact on the process of fetal growth so she may deliver LBW babies (Mutalazimah, 2005, in Hanifah, 2009).

The nutritional status based on BMI

Based on the measurement of BMI status, it is known that 10.1% of respondents are categorized as malnourished, as much as 55.1% of respondents are categorized as normal, as many as 22.5% of respondents are categorized as overweight and as much as 12.4% of respondents are categorized as obese.

BMI is a way to monitor the nutritional status of pregnant women with the formula of weight calculation (kg) divided by body height (m) 2. Maternal nutritional status has an important role in the growth and development of the fetus. When the pregnant woman had mal-nutritional status at the beginning of pregnancy, their baby has a risk of LBW baby. There is a similarity of research done by Erika who said that there was a significant correlation between the pregnant women's BMI with the LBW baby. According to Supariasa (2014), pregnant women with less nutrition according to the BMI category, they have a risky of degenerative diseases such as heart disease and hypertension.

The mother has normal nutritional status before and during pregnancy, she would deliver a healthy baby, with normal body weight. In other words, the quality of babies born depends on the nutritional condition of mothers before and during pregnancy (Waryana, 2010). Pregnant women who have more nutritional status are at risk of giving birth a baby with NTD (Neural Tube Defect) disorder, and this risk has no relation to folate intake. According to Doshani and Konje (2015), pregnant women who are obese are at risk of impaired glucose tolerance (prediabetes) either before or during pregnancy (Shenta, 2015).

The Nutritional Status of Pregnant Women according to the Weight gain during Pregnancy

The percentage of respondents who had more nutrition and less nutrition were slight differences with 43 respondents (48.3%) had more nutrients and 42 respondents (47.2%) had less nutrition, and only 4 people (4.5%) had a normal category. The nutritional status of mothers has an important role in fetus growth and development. Lack of nutritional intake during pregnancy would harm the born baby. Weight loss as a component of nutritional status that correlates with the nutritional status of pregnant women. The increase in body weight during pregnancy was influenced by weight before pregnancy, an optimal weight gain of approximately 20% of the mother's weight before pregnancy (Cunningham, 2014).

Several factors influence weight gain namely low socio-economic status so that it affects low purchasing nutritional food, and morning sickness. Morning sickness or emetic gravidarum is a common discomfort delivered by young pregnant women marked with nausea and vomiting in the morning. This discomfort can occur throughout the day and if it occurs in a long time without any treatment, it will cause a bad effect. One of the physical impacts that can be caused is the loss of appetite resulting in significant weight loss (Aryani, et al, 2018).

When pregnant women had less nutritional status at the beginning of pregnancy and increased weight during pregnancy < 10 kg until giving birth so that the risk of giving birth to a small baby or LBW baby. This in-line with research conducted by Erika in Yongki (2012) in Vietnam found that mothers who have a pregnancy weight gain < 10 kg, generally have a risk of childbirth with LBW baby (Ningrum & Cahyaningrum, 2018).

Pregnant women with weight gain excessively have a greater risk of having various complications during pregnancy and childbirth. According to Wiknjosastro (2016), when women's weight rises more than it should be, it is recommended to reduce foods that contain carbohydrates, fats, and sweet foods. However, do not do a strict diet because it will harm the fetus. Some studies have shown that pregnant women who have a strict diet tend to have infants with a lower weight, on the other hand, an obese pregnant woman had a greater risk of having a big baby, and the possibility of bleeding (Fikawati, 2012).

CONCLUSION AND RECOMMENDATION

It can be concluded that the nutritional status of pregnant women based on upper arm circumference is mostly in normal PCM, based on BMI is mostly in the normal and based on weight gain category is similar both more and less nutrition. This study can be used as basic information for health professionals to develop health promotion programs regarding the nutritional status and further research needs to be done related to the impact of malnutrition and excess nutrition on pregnancy.

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