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Article

The Relationship Between Weight Gain During Pregnancy Towards Childbirth

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A B S T R A C T

Increased energy and nutrients are needed for fetal growth and development, increase in the size of the uterine organs, as well as changes in the composition and metabolism of the mother's body. The nutritional status of pregnant women can be seen through several factors including the adjusted body mass index (BMI) of the mother before pregnancy which will affect how much the ideal increase in pregnancy during pregnancy, including the size of the LLA (Upper Arm Circumference) to achieve an ideal state. It aims to prevent weight gain that is too much or too little for pregnant women who will also affect the birth process and the condition of the fetus being born. The purpose of this study was to analyze the relationship between maternal weight gain during pregnancy and childbirth. The research method used is quantitative, with cross sectional approach. The study was conducted at the Jagir Community Health Center in Surabaya, with a sample of 80 people, the sampling technique used purposive sampling. Data obtained using SPSS with chi square test. The results showed there was a relationship between maternal weight gain during pregnancy which was seen based on body mass index (BMI) with the labor process that took place. In the implementation of midwifery care for pregnant women nutritional status monitoring and weight gain are monitored since the beginning of pregnancy so that labor takes place smoothly

I. INTRODUCTION

Pregnancy is a change in order to continue the offspring that occur naturally, producing a fetus that grows in the mother's womb, and then can be explained by the growth rate and size of the fetus according to gestational age, at every pregnancy examination.[1] Pregnancy causes an increase in energy metabolism. Every couple must expect the process pregnancy that takes place healthy and safe until the delivery process and healthy fetus. For this reason, readiness is needed starting from before pregnancy and during pregnancy, one of which is through adequate nutrition. The nutritional status of pregnant women is one indicator in measuring status community nutrition. If the nutritional intake for pregnant women from food is not balanced with the body's needs, there will be a deficiency of nutrients. Therefore, the need for energy and other nutrients increases during pregnancy.

Increased energy and nutrients it is necessary for fetal growth and development, addition the size of the uterine organs, as well as changes in body composition and metabolism mother. So that the of certain nutrients needed during pregnancy can causes the fetus to grow in perfectly.[2] Nutritional problems that are often faced by mothers pregnancy, namely Chronic Energy Deficiency (KEK) and nutritional anemia. Maternal nutritional status pregnancy can be seen through several factors, including adjusted for BMI (Body Mass Index) before pregnancy which will affect how much many of the ideal increase in pregnant women during pregnancy include the size of ALL (Upper Arm Circumference) to achieve the ideal state.

Recommendations for weight gain for pregnant women based on pre-pregnancy BMI according to IOM are: BMI <18.5 kg / m2 gain weight 28-40 pounds (equivalent to 12.6-18 kg), BMI 18.5-24.9 kg / m2 with weight gain 25-35 pounds (equivalent to 11.25-15.75kg), IMT 25-29.9 kg / m2 with weight gain of 15-25 pounds (equivalent to 6.75-11.25kg) and BMI 30 kg / m2 with weight gain of 11-20 pounds (equivalent to 4.95-9kg).[3]

The results of other studies also indicate that prahamil nutritional status is related to infant weight and body length. Women who have a BMI <26.0 kg / m2 will have a baby with a body length of 1.5 cm more than women who have a BMI <19.8 kg / m2, as well as research at Rajavithi Hospital, Thailand obtained data that underweight women group tend to give birth to LBW babies and premature, obese group mothers give birth to macrosomia / large babies.[4]. Therefore, researchers want to know how the relationship between nutritional status of pregnant women with the delivery process.

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II. METHODS

The research method used is quantitative with cross sectional approach. This research was conducted at the Jagir Puskesmas in Surabaya by looking at the Maternal and Child Health (MCH) book and puskesmas medical record data. The population in this study was maternity in the Jagir Health Center in May-June 2019, with a total sample of 80 people. The sampling technique used purposive sampling The research instrument used was medical record data in Puskesmas Jagir Surabaya and questionnaires. Data from medical records were obtained by collecting maternal data first, then next recapitulate the data in the mother's medical record or KIA book pregnant regarding the height and weight of the mother before pregnancy, then do recapitulation of the delivery process. Then the data were analyzed using SPSS with the chi square test.

III. RESULT

The results of this study showed that the majority of mothers during their pregnancy experienced a weight gain that was not in accordance with the Body Mass Index (BMI) calculated at the beginning of pregnancy, totaling 47 (59%) respondents. Respondents in this study, as many as 46 (58%) of mothers whose labor took place spontaneously, while 34 (42%) of the other respondents the delivery process was carried out by caesarean section. After analyzing the data by using the chi square test, the value of p = 0.000 is obtained, which means there is a relationship between maternal weight gain during pregnancy and childbirth.

Table

Table 1. Frequency distribution based on age, weight gain and labor process

Variable		f	%
Age	< 20 years old	3	4
	20 – 35 years old	68	85
	>35 years old	9	11
Appropriate Weight Gain	Suitable	33	41
	Not suitable	47	59
Delivery process	Spontaneous delivery process	46	58
	Caesarean Sectio	34	42

Based on table 1 shows that of the 80 respondents who participated in this study, most of the 68 respondents (85%) were in the reproductive age range of 20 - 35 years, while for the weight gain some 47 respondents (59%) experienced weight gain which is not in accordance with the ideal weight gain based on the Body Mass Index (BMI) before pregnancy. Research data on the delivery process showed that some 46 (58%) respondents of the birth process took place spontaneously.

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Table 2. Cross table of the relationship between weight gain and labor

Variable		Delivery process			P value
		Spontaneous delivery process	Caesarean Sectio		
Appropriate Weight Gain	Suitable	19	14	33	0.000
	Not suitable	27	20	47	
		46	34	80	

Table 2 shows that the majority of respondents who gained weight according to spontaneous labor were 27 respondents. Then performed an analysis using the chi square test obtained p value 0.000> 0.05 which means there is a relationship between maternal weight gain during pregnancy with childbirth.

IV. DISCUSSION

Research conducted at the Jagir Community Health Center in Surabaya on 80 respondents showed that there was a relationship between maternal weight gain during pregnancy and childbirth with a p value of 0,000. Weight gain in pregnant women is measured using the Body Mass Index (BMI) in early pregnancy by looking at body weight and height. Research conducted by Ruth found that mothers with a BMI ≥ 25 kg / m2 are at risk of developing hypertension in pregnancy, tend to have a cesarean section and their babies tend to have low birth weight, death, and asphyxia.[5]

The results of this study are in accordance with the theory that in pregnant women with excess body weight, it turns out there is an increase and association with outcomes that are not good during perinatal for themselves and the fetus. In women with excess BMI the incidence of disease and other complications increases such as gestational diabetes, macrosomia, and caesarean section delivery. In women with BMI> 29 g / m2, there is an increase of 2-4 times the possibility of caesarean section action.[6] The delivery process is influenced by several factors including the passage, passenger, power, posititon, psicology. In addition, at the time of data collection most respondents were of reproductive age that is 20-35 years. So that most respondents are not at a high risk score because of the age factor when referring to the Poedji Rahayu Score Card (KSPR). The age factor can be one of the considerations in making decisions to determine the delivery process to be performed. If a pregnant woman is over 35 years old, it can be an alternative part of caesarean delivery, because the mother is at a high risk score and during labor there can be some complications if labor is done normally / spontaneously such as

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maternal labor factors that can result in the first stage or the second time elongated, asphyxiated baby.

During the data collection process, the researchers found that some women who gave birth in a caesarean section were those who had an elongated first stage. Research conducted by Purwaningsih and Fatmawati (2010) shows that labor is not progressing labor with a first-phase latent phase that is more than 8 hours, or crosses the alert line on the partograph sheet and the unborn baby.[7] In the first stage of labor can cause several complications including infection, dehydration, fetal asphyxia, fatigue and death in the womb. Therefore the choice of delivery method in an alternative section caesarea choice. These results are in line with research conducted by Aprina and Anita (2016) which states that in labor that is not progressing there are indications for labor in a caesarean section.[8] While one of the predisposing factors of parturition or prolonged labor is education, age, parity and maternal psychology as well as fetal factors (abnormalities in the shape or shape of the fetus ie large fetuses; congenital abnormalities). [9][9] Other studies have shown that maternal parity also contributes to the incidence of prolonged labor.[9]

So it is necessary to do better midwifery care by health workers, especially midwives, in terms of monitoring the process of pregnancy. At the beginning of pregnancy it is necessary to measure the Body Mass Index (BMI) of pregnant women with the aim of being able to properly monitor maternal weight gain during pregnancy so as not to be less or more by taking into account the estimated fetal weight that is adjusted to the gestational age.

V. CONCLUSION

The conclusion of this study is that the majority of respondents are of reproductive age, that is 20 - 35 years. And from the results of the analysis obtained that there is a relationship between weight gain in pregnant women which is measured based on the Body Mass Index (BMI) at the beginning of pregnancy with the birth process.

VI. REFERENCES

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