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EFFECT OF STEAMING PURPLE POTATOES (*IPOMOEA BATATAS*) ON INCREASING WEIGHT IN PREGNANT WOMEN WITH CHRONIC ENERGY DEFICIENCY (CED)

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ABSTRACT

The nutritional problem that pregnant women must avoid is Chronic Energy Deficiency. Pregnant women who experience CED experience a protein-energy imbalance. Providing additional food, especially for pregnant women with CED, is an effort to overcome nutritional problems, one of which is providing purple sweet potatoes. The highest number of CED pregnant women was at the Tanjung Ampalu Community Health Center, namely 82 people (17.3%). The aim of the research is the effect of giving steamed purple sweet potatoes (Ipomoea Batatas) on weight gain in pregnant women at the Tanjung Ampalu Community Health Center, Sijunjung Regency. This type of research is a quasi-experimental One Group Pretest - Posttest Design. The research was carried out from the initial survey - completion of the research. The sample in this study was 23 people. The sampling technique in this research was purposive sampling. Data analysis used the Wilcoxon test with a confidence level of 95%. The results of the study showed that the average weight before being given steamed purple sweet potatoes was 43.01 kg and after being given steamed purple sweet potatoes was 44.80 kg. There is an effect of giving steamed purple sweet potatoes (Ipomoea Batatas) on increasing the weight of pregnant women with a p value of 0.000. It was concluded that there was an effect of giving steamed purple sweet potatoes on increasing the weight of pregnant women with babies. It is hoped that mothers will always pay attention to their daily nutritional intake during pregnancy to prevent Chronic Energy Deficiency.

Keywords:Body Weight, Purple Sweet Potato

INTRODUCTION

The World Health Organization (WHO) reported that the prevalence of CED in pregnant women in 2016 was (30.1%) and there was an increase in 2017, namely (35%), WHO also recorded 40% Maternal mortality in developing countries is related to chronic energy deficiency . [1]

Data from the West Sumatra Provincial Health Service for 2020 showed that achievements in 2019 and 2020 showed a decrease in the percentage of pregnant women with CED from 8.84% to 8.6%. and is below the target. According to the World Health Organization (WHO), the threshold for public health problems for pregnant women with a risk of CED is <5%. This shows that Indonesia and also the province of West Sumatra still have public health problems for CED pregnant women. Meanwhile, in 2021, West Sumatra Province occupied the 13th position with the highest incidence of CED in pregnant women, namely 14.5% [2]

Based on data from Sijunjung Regency, it was found that the highest number of CED pregnant women was at the Sumpur Kudus Community Health Center with an achievement of 28.5% of the targeted 14.5%. Meanwhile, Muaro Bodi Health Center has the lowest CED percentage, namely 5.6% of the target. And the Kamang Community Health Center has an achievement of 14.5% [3] . Then in 2022, Sijunjung Regency data showed that 472 mothers experienced

CED. The highest number of CED pregnant women was at the Tanjung Ampalu Community Health Center, namely 82 people (17.3%). The second is Padang Laweh Community Health Center, namely 57 people (12%) and the third Community Health Center for CED cases is at Gambok and Kamang Community Health Center, namely 48 people (10%) [3][4].

Based on data from the Tanjung Ampalu Health Center, it was found that the number of pregnant women experiencing chronic energy deficiency (CED) in January-December 2022 was 82 people [5]. One of the nutritional problems that pregnant women must avoid is Chronic Energy Deficiency (*CED)*. Consuming nutritious food as needed during pregnancy is a very appropriate step to prevent CED. Purple sweet potato is known to be rich in benefits, it has a fairly high anthocyanin content which functions as an antioxidant, antimutagenic, anticarcinogenic and has quite high energy [6].

Objective study is for know Influence Giving Steamer Sweet potato Jalar Purple (*Ipomoea Batatas*) Against Increase in Weight in Mothers Pregnant at the Community Health Center Ampalu Regency Sijunjung. CED can cause fatal health problems for pregnant women and the fetus. Consume nutritious food as needed during pregnancy is a very appropriate step to prevent its occurrence, it's just that pregnant women often experience a decrease in appetite during pregnancy, resulting in inadequate nutritional intake. Therefore, it requires the efforts of one type of sweet mother that can used is purple sweet potato (Ipomoea Batatas). Purple sweet potato is known rich in benefits, has a fairly high anthocyanin content functions as an antioxidant, antimutagenic, anticarcinogenic and energy which is quite high [6][7].

This is in accordance with Suparni's research, 2022 on Influence Giving Purple Sweet Potatoes (Ipomoea Batatas) Against Weight Gain Body (Research on Pregnant Women Who Experience Energy Deficiency Chronic) states that there is a difference in the weight of pregnant women with CED before and after being given purple sweet potatoes with a p value of 0.007 (>0.05) [7]. Based on an initial survey conducted on 6 pregnant women, 3 pregnant women experienced chronic energy deficiency and did not gain weight. 3 pregnant women who do not have chronic energy deficiency. Of the 3 mothers with chronic energy deficiency, 3 mothers did not know the benefits and contents of sweet potatoes. 1 mother had consumed sweet potatoes while pregnant. Of the 3 mothers who did not experience chronic energy deficiency, 2 mothers did not know the benefits and contents of sweet potatoes. 2 mothers had consumed sweet potatoes while pregnant.

Based on the background, researchers are interested in researching with the title "The Effect of Giving Steamed Purple Sweet Potatoes (Ipomoea Batatas) on Increasing the Weight of Pregnant Women with CED in the Health Center Sijunjung"

RESEARCH METHODS

The scope of this research is Influence Giving Steamer Sweet potato Jalar Purple (Ipomoea Batatas) Against Increase in weight in Mothers Pregnant at the Community Health Center Ampalu Regency Sijunjung. The research was carried out from the initial survey - completion study. The type of research used is quasi-experimental using a one group design pre-posttest design. The intervention used was giving steaming sweet potatoes to increase weight in pregnant women with CED. The population of this study was all pregnant women who experienced CED in the Tanjung Ampalu Community Health Center working area, totaling 82 pregnant women The sample in this study was taken using a purposive sampling technique, namely 2 3 pregnant women with CED

Trimester II. Data processing uses SPSS with univariate and bivariate analysis with paired sample T-test.

RESULTS AND DISCUSSIONS

Table 1 Data Normality Test

Mother 's Weight Pregnant	N	P-*value*	Information
Before	23	0.001	Abnormal _
After		0.002	Abnormal _

Based on table is obtained mark significant mother 's weight pregnant before given sweet potato sweet potato namely p = 0.001 and after given sweet potato sweet potato that is own p value = 0.002. Statistical test results obtained mark significant both of them have distributed data is not normal so the test is used is the *Wilcoxon Signed Ranks* test.

Table 2 Average weight of pregnant women with Chronic Energy Deficiency (CED) before being given sweet potatoes

WEIGHT Mom Pregnant	N	Mean	Standard Deviation	Min	Max
Before given steamer sweet potato sweet potato	23	43.01	3.34	32	46.75

Based on table obtained the average body weight before given steamer sweet potato sweet potato purple yaasoo namely 43.01 kg with a standard deviation of 3.34. Minimum body weight 32 kg and maximum body weight namely 46.75 kg.

Addition based on weight lust eat what you have start improve and what needs to be done reproduced Normal gain is between 6-7.4 kg or 0.3-0.7 kg / week. Providing additional food is an effort to increase nutritional intake for pregnant women with chronic energy deficiency to meet their nutritional needs. The results of this study showed that there was an increase in energy and protein consumption in pregnant women with chronic energy deficiency after being given additional food in the form of biscuits containing 520 calories, 56 carbohydrates and 16 grams of protein.[8] Based on study concerning the Effect of Giving Purple Sweet Potatoes (Ipomoea Batatas) on Weight Gain (Research on Pregnant Women Who Experience Chronic Energy Deficiency) stated that samples with a weight group value before treatment that was smaller than the weight group value after treatment was 1 sample [8].

Based on study concerning the Effect of Giving Purple Sweet Potatoes on Weight Gain in Pregnant Women with Chronic Energy Deficiency stated that the weight before being given purple sweet potatoes to CED pregnant women had an average of 41.829 kg with a standard deviation value of 3.891 kg, a minimum value of 36.5 kg and a maximum value of 52.1 kg [9].

According to assumption researcher weight before given sweet potato sweet potato purple has an average of 43.01 kg. Mother pregnant with Lack Energy Chronic is Mother less pregnant intake nutrition and can cause underweight moment pregnancy. Before given steamer sweet potato sweet potato purple respondents Not yet Can fulfil nutrition during pregnancy. Therefore That expected to power health For can do counseling about nutrition in mothers pregnant. So that Mother pregnant with underweight.

Table 3 Average weight of pregnant women with Chronic Energy Deficiency *(CED)* after being given sweet potatoes

WEIGHT Mom Pregnant	N	Mean	Standard Deviation	Min	Max
After given steamer sweet potato sweet potato	23	44.80	3.11	34.59	48.35

Based on table the average body weight after given steamer sweet potato sweet potato purple namely 44.80 kg with a standard deviation of 3.11. Minimum body weight 34.59 kg and maximum body weight namely 48.35 kg.

Nutrition during pregnancy is food or a menu that contains all the nutrients needed by pregnant women every day and contains balanced nutrients in amounts according to needs and not excessively. The mother's health condition before and after pregnancy greatly determines the health of the pregnant woman. So, for the sake of a successful pregnancy, the mother's nutritional condition at the time of conception must be in good condition and during this time she must receive additional energy, protein, vitamins and minerals [10].

Based on the Effect of Giving Purple Sweet Potatoes (Ipomoea Batatas) on the Weight Gain of Pregnants with Chronic Energy Deficiency, it is stated that the average weight of pregnant women after being given purple sweet potatoes is 46.81 kg with an SD of 1.97. Minimum weight is 42.72 kg and maximum weight is 48.89 kg [9].

Based on research regarding the use of purple sweet potato baruasa as a snack in an effort to improve the nutritional status of pregnant women, it was stated that the average nutritional status increased to 24.47 ± 2.44 after the intervention [6].

According to researchers' assumptions, after being given steamed purple sweet potatoes, the mother's average weight increased to 444.25 kg. Sweet potatoes contain nutritious substances per 100 grams, namely energy 123 kcal, protein 1.8 grams, fat 0.7 grams, carbohydrates 27.9 grams, calcium 30 mg, phosphorus 49 mg, iron 0.7 mg, vitamin A7700 SI, vitamin C 22 mg, vitamin B 10.90 mg. The content of purple sweet potatoes is needed by pregnant women for daily nutritional needs. By giving steamed purple sweet potatoes, pregnant women experience weight gain. Therefore, it is hoped that health workers will always monitor the mother's nutritional intake every day so that the weight of pregnant women with CED increases.

Table 4 Influence Giving Steam Purple Sweet Potato *(Ipomoea Batatas)* Against Increase in Weight for Pregnant Women With Chronic Energy Deficiency *(CED)*

Mother 's Weight Pregnant	N	Mean	SD	Md	P-Value
Before given steamer sweet potato sweet potato	23	43.01	3.34	-0.24	0,000
After given steamer sweet potato sweet potato		44.80	3.11		

Based on table 5.4 is obtained average body weight before given steamer sweet potato sweet potato purple namely 43.01 kg with a standard deviation of 3.34. Then average body weight after given steamer sweet potato sweet potato purple namely 44.80 kg with a standard deviation of 3.11. Difference second variable namely -0.24. Statistical results show that p value = 0.000 < 0.05 (Ho is rejected) meaning There is Influence Giving Steamer Sweet potato Jalar Purple (*Ipomoea Batatas*) Against Increase in Weight in Mothers Pregnant Grandpa at the Community Health Center.

The most important parameter in determining food quality and testing nutritional content when it is given as additional food to pregnant women and toddlers is the nutritional value of the food. One food that contains a source of carbohydrates that the body really needs is sweet potatoes, which in certain areas are called teo rambat or huwi boled. Several types of sweet potatoes are white, red and purple. In 100 grams of sweet potato the energy content is 123 kcal, 1.8 grams of protein, 1.7 grams of fat, 27.9 grams of carbohydrates, 30 mg calcium, 49 mg phosphorus, 0.7 mg iron, vitamin A 7700 SI, vitamin C 22 mg, vitamin B1 0.90 mg [11].

Based on study concerning the Effect of Giving Purple Sweet Potatoes (Ipomoea Batatas) on Weight Gain (Research on Pregnant Women Who Experience Chronic Energy Deficiency) states that the results of this test obtained a

p-value of 0.007 or smaller than 0.005. The conclusion was that there was a difference in body weight before and after being given purple sweet potato (Ipomoea Batatas) [9].

Based on study concerning the Effect of Giving Purple Sweet Potatoes on Weight Gain in Pregnant Women with Chronic Energy Deficiency states that there is an effect of giving purple sweet potatoes on weight gain in SEZ pregnant women in the Sulilіran Baru Health Center Working Area in 2022 with a p value of 0.000 with an increase amounting to 0.8857 kg [11].

According to assumption researcher giving Steam Purple sweet potatoes are effective in increasing the weight of pregnant women because purple sweet potatoes contain many nutrients that can meet the mother's daily nutritional needs so that the mother's weight can increase. Purple sweet potatoes are a source of carbohydrates and a fairly high source of calories. Purple sweet potatoes are also a source of vitamins and minerals. The vitamins contained in sweet potatoes include vitamin A, vitamin C, thiamin (vitamin B1) and ribovlavin. Meanwhile, the minerals in purple sweet potatoes include iron (Fe), phosphorus (P) and calcium (Ca). Other contents are protein, fat, crude fiber and ash. The content of purple sweet potatoes can help meet the nutritional needs of pregnant women. In this study, the difference between the two variables, namely weight before and after administration steamed purple sweet potato is 1.58. Rate increase heavy during pregnant is the same instructions importance with increase weight. During the first trimester, range increase heavy preferably 1-2 Kg (350-400 g/mg), II & III trimesters around 0.34-0.5 Kg each Sunday [11][12][13].

CONCLUSION

From results study Effect Of Steaming Purple Potatoes (*Ipomoea Batatas*) On Increasing Weight In Pregnant Women With Chronic Energy Deficiency can be concluded There is an Effect of Giving Steam Purple Sweet Potato *(Ipomoea Batatas)* Against Increased Weight of Pregnant Women with CED

1. The average body weight before being given steamed purple sweet potatoes was 43.01 kg with a standard deviation of 3.11. Minimum body weight is 34.59 kg and maximum body weight is 48.35 kg.
2. The average body weight after being given steamed purple sweet potatoes was 44.80 kg with a standard deviation of 3.11. Minimum body weight is 34.59 kg and maximum body weight is 48.35 kg.
3. The effect of giving steamed purple sweet potatoes (Ipomoea Batatas) on weight gain in pregnant women at Tanjung Ampalu Health Center, Sijunjung Regency in 2023 p = 0.000 < 0.05.

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