

## THE INFLUENCE OF HEALTH EDUCATION ABOUT NUTRITION IN THE ELDERLY ON BODY WEIGHT IN THE MEDAN AREA PUSKESMAS

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### ABSTRACT

Monitoring nutritional status is related to regular body weight weighing at least once a week, be aware of weight gain or weight loss of more than 0.5 kg/week. An increase in weight of more than 0.5 kg in 1 week is a risk of being overweight and a weight loss of more than 0.5 kg / week indicates being underweight. The general aim of the research is to analyze the effect of health education on nutrition for the elderly on body weight at the Medan Area Health Center. This type of research is quantitative using a quasi-experimental design, a group design without a control group using the method (one group pre test and post test design). The total sampling technique was 65 people. The research results showed that the description of knowledge before Health Education Using Posters about nutrition at the Medan Area Health Center was found to be less than 44 people (67.79%) and after Health Education Using Posters about nutrition at the Medan Area Health Center it was found to have increased to the good category of 54 people (83.1%). The Influence of Education Health Using Using Posters about nutrition at the Medan Area Community Health Center was found to have an influence with a p value of 0.000 and t-test 20.121 and the Effect of Health Education Using Using Posters about nutrition on body weight at the Medan Area Community Health Center was found to have an influence with a p value of 0.000 and t-test 10.732. For the elderly, they can apply the information they have obtained to consume food according to nutritional standards. For the Community Health Center, carry out regular outreach programs at the Community Health Center in the education program about nutrition for the elderly at the Community Health Center.

**Keywords: Influence, Health Education, Nutrition, Body Weight, Elderly**

## INTRODUCTION

Old age is not a disease, although it can cause social problems. In several countries, especially in developed countries, life expectancy has increased so that people aged over 65 years have also increased. The increase in the number of elderly people has led to the need for attention to the elderly so that the elderly not only live long but can also enjoy their old age happily and improve their quality of life.

The calorie needs of the elderly decrease due to the reduction in basic calories from physical needs. Basic calories are the calories needed to carry out body activities while at rest, for example: for the heart, intestines, respiration and kidneys. What causes nutritional problems in the elderly in the form of excess nutrition in the elderly often occurs in western countries and big cities. The habit of eating a lot when you are young causes excess body weight, especially in the elderly, calorie use decreases due to reduced physical activity. Eating habits are difficult to change even if you are aware of eating less. Obesity is one of the triggers of various diseases, for example: heart disease, diabetes and high blood pressure.

Malnutrition problems are often caused by socio-economic problems and also due to disease. If calorie consumption is too low than required, it causes body weight to be less than normal. If this is accompanied by a protein deficiency, it causes irreparable cell damage, resulting in hair loss, decreased resistance to disease, and the

possibility of being susceptible to infection. Vitamin deficiency If the consumption of fruit and vegetables in the diet is insufficient and combined with a lack of protein in the diet, the result is reduced appetite, decreased vision, dry skin, and a sluggish and lackluster appearance.

Data from the Medan Area Community Health Center showed that the number of elderly people was 65 people. The results of weighing showed that 5 people were thin, 9 people were fat and 14 people were normal. To improve the health of the elderly at the Community Health Center, it is necessary to provide education about nutrition so that the elderly's weight remains stable and their health is maintained so that they can improve their health.

Based on the results of interviews with 10 elderly people at the Tanah Merah Community Health Center, it was found that 5 elderly people were skinny because they had difficulty eating because their teeth were missing (toothless), 4 obese people said they woke up hungry at night so they ate food to be full and could go back to sleep and 1 person was of normal weight. watch your food and take a leisurely walk in the morning.

Based on the description above, the author is interested in conducting research on the Effect of Health Education on Nutrition for the Elderly on Body Weight at the Medan Area Community Health Center.

## METHOD

This type of research is quantitative using a quasi-experimental design, a group design without a control group using the method (one group pre test and post test design). First, research or measurements are carried out on this group. Next, a trial is carried out and the group is reassessed (notoadmojo, 2022)

## LOCATION AND TIME OF RESEARCH

The research was carried out by the Tanah Merah Binjai Community Health Center. The time of the research was carried out 18 January 2024- 7 February 2024.

## POPULATION AND SAMPLE

The population is the entire research subject that will be studied

The sample in the research was a total sampling technique, namely the entire population was used as a sample, namely 65 people.

## RESEARCH RESULT

Based on the research results, it is known that the frequency distribution according to age can be seen as follows:

**Table 1. Frequency Distribution Based on Age of Respondents at Medan Area Community Health Centers**

No	Umur	F	%
1	45-59 Tahun (Middle Age)	10	15.4
2	60-74 Tahun (Usia Lanjut)	38	58.5
3	75-90 Tahun (Usia Lanjut Tua)	17	26.2
Total		65	100.0

Based on table 1, it is known that the majority of respondents were aged 60-74 years (older age) and a small number were aged 45-59 years (middle age) as many as 10 people (15.4%).

**Table 2. Frequency Distribution Based on Respondents' Body Weight at the Medan Area Health Center**

No	Pendidikan	Frekuensi	Persentase (%)
1	Tetap	52	80.0
2	Turun	11	16.9
3	Naik	2	3.1
Total		65	100.0

Based on table 2, it is known that the majority of respondents had a constant body weight of 52 people (80.0%) and a small percentage increased by 2 people (3.12%).

**Table 3. Frequency Distribution of Respondents Based on Knowledge about Elderly Nutrition After Health Education at the Medan Area Health Center**

No	Tingkat Pengetahuan	Sebelum Pendidikan Kesehatan		Setelah Pendidikan Kesehatan		p-value
		N	%	N	%	
1	Baik	1	1.5	54	83.1	0.000
2	Cukup	20	30.8	10	15.4	
3	Kurang	44	67.7	1	1.5	
<b>TOTAL</b>		<b>65</b>	<b>100.0</b>	<b>100.0</b>	<b>65</b>	

Based on table 3 regarding knowledge before and after health education regarding elderly nutrition on body weight, the previous level of knowledge was Poor, 44 people (67.7%) increased after health education to Good, 54 people (83.1). For the effect, the p value was 0.000 ( $\alpha$  0.05). These results accepted that there was an influence of before and after knowledge on knowledge about nutrition in the elderly at the Medan Area Health Center

**Table 4. Results of Paired Sample T Test (Paired Sample T Test) Effect of Health Education on nutrition on the elderly Before and After Health Education at the Medan Area Community Health Center.**

Pengaruh	Mean	Standard Deviasi	95%CI		t-hitung	p-value
			Lower	Upper		
Sebelum	1.477	589	1.331	1.623	20.121	0,000
Sesudah	1.06	0.242				

From the table above, it shows that the t-count value is  $20.121 > t\text{-table } 0.0.67834$  and the value is significant ( $0.000 < 0.05$ ), so there is a significant influence (difference) in knowledge about nutrition on knowledge before and after health education.

**Table 5. Results of the Paired Sample T Test (Paired Sample T Test) The Effect of Health Education about nutrition in the elderly after education on the weight of the elderly in the Medan Area Community Health Center.**

Pengaruh Penkes	Mean	Standar Deviasi	95%CI		t- hitung	p-value
			Lower	Upper		
Pengetahuan Berat Badan	0.954	717	776	1.131	10.732	0,000

From the table above, it shows that the t-count value is  $10.732 > t\text{-table } 0.0.67834$  and the significant value is  $0.000 < 0.05$ , so there is a significant influence (difference) in knowledge about nutrition on the body weight of the elderly.

## RESULT AND DISCUSSION

### 1. Knowledge about elderly nutrition

Research results show that the basal metabolic rate in older people decreases by around 15-20%, due to reduced muscle mass and activity. Calories (energy) are obtained from fat 9.4 cal, carbohydrates 4 cal, and protein 4 cal per gram. For the elderly, 20-25% of the energy composition should come from protein, 20% from fat, and the rest from carbohydrates. The calorie requirement for elderly men is 1960 calories, while for elderly women it is 1700 calories. If the number of calories consumed is excessive, some of the energy will be stored in the form of fat, resulting in obesity. On the other hand, if it is too little, the body's energy reserves will be used up, so the body will become thin.

The researcher's assumption is that knowledge is the result of knowing, and this occurs after people sense a particular object. Sensing occurs through the five human senses, namely the senses of sight, hearing, smell, taste and touch. Knowledge basically consists of a

number of facts and theories that enable someone to solve the problems they face. This knowledge is obtained both from direct experience and the experience of other people (Notoatmodjo, 2022).

Gastrointestinal diseases: including toothache and ulcers. Reduced ability to digest food due to tooth decay or toothlessness, the esophagus experiences dilation, decreased hunger, decreased stomach acid, reduced sense of taste resulting in a decrease in sweet, salty, sour and bitter tastes, weak bowel movements or peristaltic movements and usually causes constipation, food absorption in the intestine decreases. To be safer, in general the protein requirement for adults per day is 1 gram per kg of body weight. In the elderly, muscle mass decreases. However, it turns out that the body's need for protein has not decreased, in fact it has to be higher than that of adults, because in the elderly the body's efficiency of using nitrogen compounds (protein) has decreased (due to less efficient digestion and absorption). Several studies recommend that for the elderly, protein consumption should be increased by 12-14% of the portion for adults. Good sources of protein include animal foods and nuts.

### 1. The Effect of Health Education Using Posters About Nutrition in the Elderly on Body Weight

Body weight of the elderly after the counseling was carried out, it was found that weight loss was in accordance with the results of the t test where there was an influence of knowledge on the weight of the elderly. The condition of the body being very fat and heavy due to excessive fat deposits, where the excess body fat exceeds 20% of the amount prescribed. recommended for a person's height and age. Excessive consumption patterns, especially those containing fat, protein and carbohydrates that are not in accordance with the body's needs. Causes of various things such as hypertension, coronary heart disease, stroke, and diabetes mellitus.

According to researchers' assumptions, aging is characterized by the loss of many body cells and a decrease in metabolism in other cells.



This process causes a decrease in body function and changes in body composition. Changes in the digestive system, namely: tooth loss, the main cause of periodontal disease which usually occurs after the age of 30 years. Other causes include poor dental health and poor nutrition, decreased sense of taste due to chronic irritation of the mucous membranes, atrophy of the sense of taste ( $\pm 80\%$ ) due to loss of sensitivity of the taste nerves on the tongue, especially sweet, salty, sour, bitter tastes. Saliva secretion is reduced by approximately 75%, resulting in the oral cavity becoming dry and reducing taste.

### CONCLUSION

1. An overview of knowledge before Health Education Using Posters about nutrition at the Medan Area Community Health Center was found to be less than 44 people (67.79%)
2. An overview of knowledge after Health Education Using Posters about nutrition at the Medan Area Community Health Center was found to have increased to the good category for 54 people (83.1%)
3. The influence of health education using posters about nutrition at the Medan Area Community Health Center was found to have an influence with a p value of 0.000 and a t-test of 20.121
4. The effect of health education using posters about nutrition on body weight at the Medan Area Community Health Center was found to have an influence with a p value of 0.000 and a t-test of 10.732

### SUGGESTION

1. For Nursing Services. Puskesmas can create regular outreach programs at the puskesmas about nutrition for the elderly.
2. For Nursing Education Create an outreach program about nutrition for the elderly and carry out outreach activities about nutrition for the elderly as a community service activity for STIKes Flora students.
3. For Nursing Research As research material for nurses regarding nutrition in the elderly as well as increasing the knowledge and experience of researchers regarding nutrition in the elderly

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