Nutritional Status of Participants in the Integrated Development Post for Non-Communicable Diseases : a Descriptive Study

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Abstract. The study was to describe the nutritional status of participants in the Integrated Development Post for Non-Communicable Diseases. The method used was descriptive quantitative with 35 respondents. Respondents were measured anthropometrically including weight, height, waist circumference and body mass index (BMI) then descriptive analysis was carried out using SPSS. The results showed that respondents who had BMI in the obesity category were 15 (42.90%), normal 14 (40%) and obese 6 (17.10%) and based on the measurement of waist circumference, respondents who experienced central obesity were 30 (85.70%) and not central obesity were 5 (14.30%). Conclusion: Maintaining nutritional status is very beneficial because someone who is overweight is at risk of experiencing several diseases such as hypertension, diabetes mellitus and heart disease.

Keywords: Non-Communicable Diseases, Nutritional Status, Posbindu

1. INTRODUCTION

The health of productive age is very important to maintain productivity and quality of life. The health of productive age is greatly influenced by a healthy lifestyle such as consuming healthy and balanced food. Meanwhile, elderly health efforts are carried out since someone is 60 years old and over aimed at maintaining a healthy, quality and productive life according to human dignity, one of which is by consuming balanced nutrition (Kemenkes RI, 2024). Food and nutrition are basic human needs that cannot be separated. Nutrition plays an important role in maintaining the health and well-being of individuals and is an important component of the health service delivery system and a person's nutritional status affects clinical outcomes (Kesari & Noel, 2023).

Humans tend to be irregular in paying attention to their daily diet, so that the consequences can interfere with health. To get rid of bad habits, they need to be replaced by doing new, better habits. In general, Pete Cohen said that the way to appreciate life is to live it healthily and regularly, such as drinking enough water, having breakfast every day, and eating a nutritious lunch is certainly highly recommended (Annisah, 2011). Lifestyle is actually the most important factor that greatly influences people's lives. Unhealthy lifestyle can cause hypertension, for example food, physical activity, stress and smoking (Pusparani, 2016).

Two-thirds or more of other diseases are closely related to nutrition. Experts believe that 30-50% of nutritional factors play an important role in achieving and maintaining optimal health conditions for people with hypertension, by increasing nutrition, other conditions can be maintained or even improved (Depkes RI, 2006). In addition, various

studies conducted by researchers show that other nutritional deficiencies are mostly excessive nutritional status which triggers the emergence of various degenerative diseases such as coronary heart disease, hypertension, diabetes mellitus, gallstones, rheumatism, kidney disease, liver cirrhosis, and cancer. Some problems with malnutrition also often occur, such as chronic energy deficiency, anemia and other micronutrient deficiencies (Maryam & Dkk, 2012).

(Churak & dkk, 2018) explained the factors related to the nutritional status of elderly people in Ubon Ra tchalthalni, Thailand. Whereas thirty-nine hundred and ninety-eight respondents were included in the survey, in this survey women became the majority of subjects (258 participants) (64.8%). In this survey of female participants, 55.0% were classified as other-young (60 to 69 years old) while 51.4% were other-old men. The prevalence of naive gambling, the number of gambling, and the health status which is considered to be 'not good' is 31.9 %, 11.8% and 24.9%. BMI averages are 22.8 ± 3.6 kg /m2 for women and 24.2 ± 4.4 kg /m2 for women. Based on the results of Riskesdals, the prevalence of nutritional status of the adult population (\geq 18 years) based on the BMI (Body Mass Index) category is thin nutritional status 11.1%, Normal 62.7% and overweight nutritional status 11.5%, obesity 14.8% (Kementerian Kesehatan Republik Indonesia, 2018). Based on this phenomenon, researchers are interested in conducting a study on the differences in nutritional status of participants in the Integrated Non-Communicable Diseases Development Post.

2. LITERATURE REVIEW

Nutritional status is a measure of a person's physiological condition resulting from food consumption, absorption, and utilization of nutrients. Nutritional status can be assessed from the Body Mass Index (BMI). A high Body Mass Index (BMI) is caused by increased adiposity or increased other body composition (Yunitasari et al., 2019). Asrinawati & Norfai (2014) explain that nutritional status is the health condition of individuals or groups determined by the degree of physical need for energy and nutrients obtained from food and food whose physical impact is measured anthropometrically. Overnutrition increases the risk of hypertension for several reasons. The greater the body mass, the more blood is needed to supply oxygen and food to body tissues. This means that the volume of blood circulating through the blood vessels increases, putting greater pressure on the artery walls, which will cause an increase in blood pressure. Each individual has daily nutritional needs that must be met, both based on the number of calories needed, and the nutritional content consumed. Daily calorie needs are individual, because they are based on energy needs for daily basal metabolism, calorie needs to accommodate activity needs, and adjusted to the individual's age. Obesity and wasting are opposite nutritional states, but they cause serious health problems in different ways, and are of global concern. Obesity is a major contributor to the global burden of chronic disease and disability; while wasting increases the risk of further malnutrition in subsequent generations (Usfar et al., 2010). Short and very short is a nutritional status based on the height index for age (TB/U), which is the equivalent of the international term for stunted status and severely stunted status. The main factors that play a role are the height and education level of the mother. Taller mothers increase the potential for increasing height from stunting; through height at birth and the first year (Desmond & Casale, 2017).

Diet is the most important behavior that can affect nutritional status. This is because the quantity and quality of food and beverages consumed will affect nutritional intake, which will affect individual and community health. Optimal nutrition is essential for normal growth and physical and intellectual development of infants, children, and all age groups. Good nutrition makes body weight normal or healthy, the body is not susceptible to infectious diseases, work productivity increases and is protected from chronic diseases and premature death. In order for the body to remain healthy and avoid various chronic diseases or noncommunicable diseases related to nutrition, the community's diet needs to be improved towards balanced nutritional consumption. Good nutritional status can improve individual and community health (Menkes RI, 2014).

3. METHODS

This study is a qualitative descriptive study to describe the nutritional status of participants in the Terpati Non-Communicable Diseases Development Post in Bumiroso Village. The data of the study were obtained from the results of anthropometric measurements of participants present at the PTM Posbindu totaling 35 participants or respondents and taken as a total sample. Participants who attended were subjected to anthropometric measurements including body weight, body height, abdominal circumference and body mass index (BMI), these data were then carried out based on traditional categorization. BMI is thin (<17 kg/m2), underweight (17 to <18.5 kg/m2), normal (18.5-25 kg/m2), fat (>25-27 kg/m2) and obese (>27 kg/m2) and central obesity based on abdominal circumference, namely central obesity in women \geq 80 cm and men \geq 90

cm (Kemenkes RI, 2021). Then, the results of the data were carried out through descriptive analysis using SPSS (Staltisticall Palckalge for the Social Sciences).

4. RESULTS

Based on the descriptive test results, the results of the demographic analysis of the hypertension category of the participants in Posbindu PTM Bumiroso were explored table 1 table below.

Va ria bel	Frekuensi	Prosentailse
Gender		
Male	5	14,30
Female	30	85,70
Totaill	35	100
Age		
<60 year	18	51,43
≥60 year	17	48,57
Totail	35	100
IMT		
Very thin	0	0,00
Thin	0	0,00
Normall	14	40,0
Fat	6	17,10
Obesity	15	42,90
Totaill	35	100
Waist Circumference		
Central obesity	30	85,70
Not	30	14,30
Totall	35	100

Table 1. Respondent characteristics and anthropometric measurements

The data analysis explained that the respondents were female as many as 30 (85.70%) and male respondents as many as 5 (14.30%), respondents aged <60 years as many as 18 (51.43%) and respondents aged \geq 60 years as many as 17 (48.57%), respondents who had a BMI in the obesity category as many as 15 (42.90%), normal 14 (40%) and overweight as many as 6 (17.10%) and based on the measurement of abdominal circumference, respondents who suffered from central obesity were 30 (85.70%) and those without central obesity were 5 (14.30%).

5. DISCUSSION

The results of this study found that there were 30 female respondents (85.70%) and 5 male respondents (14.30%), 18 respondents aged <60 years (51.43%) and 17 respondents aged \geq 60 years (48.57%). Respondents of female gender were 30 (85.70%) and male respondents were 5 (14.30%), respondents aged <60 years were 18 (51.43%) and respondents aged \geq 60 years were 17 (48.57%), respondents who had a BMI in the obesity category were 15 (42.90%), normal 14 (40%) and overweight 6 (17.10%) and based on the measurement of waist circumference, respondents who 30 (85.70%) had central obesity and 5 (14.30%) had no central obesity.

The results of this study found that respondents who had a BMI in the obesity category were 15 (42.90%), normal 14 (40%) and overweight 6 (17.10%) and based on abdominal circumference measurements, respondents who suffered from central obesity were 30 (85.70%) and non-central obesity were 5 (14.30%). Obesity is an excessive accumulation of fat due to an imbalance between energy intake and energy expenditure over time. Several physiological mechanisms play an important role in an individual's body to maintain a balance between energy intake and total energy expenditure and to maintain a stable balance. Obesity is found in adults, adolescents and young people. More than 1.4 billion adults are overweight and more than 500 million adults worldwide are obese (WHO, 2008).

An individual's daily nutritional needs depend on various factors such as age, gender and activity. Therefore, the recommended dietary intake values are different for each individual group. Imbalanced dietary intake causes malnutrition. Malnutrition includes conditions caused by insufficient or excessive intake of macronutrients and micronutrients (Mueller et al., 2011). Based on WHO (World Health Organization) guidelines, malnutrition is explained as covering three categories, namely (1) malnutrition (low weight for height, low weight for age and low weight for age), (2) lack of water or excess of micronutrients (vitamins and minerals), and (3) excess nutrition (excess water, obesity and poor health conditions). related to other diets such as diabetes mellitus type 2, cardiovascular disorders) (Kesari & Noel, 2023). The larger the body's mass, the more water it needs to supply oxygen and play to the body's tissues. This means that the volume of blood circulating through the blood vessels increases, thereby exerting greater pressure on the arterial walls (Karim et al., 2018).

According to (Kemenkes RI, 2015) someone who is obese must implement lifestyle changes for a longer period of time, namely, in addition to their lifestyle, including (1) diet patterns (diet patterns include the amount, type, type of diet, and processing of diet. The types of diet in a balanced nutritional pyramid consist of the carbohydrate group, vegetables and fruit, protein and oil, sugar, and lard. The recommended consumption of sugar, lard and fat: 4 tablespoons of sugar, 1 teaspoon of lard and 5 tablespoons of oil); (2) Physical activity patterns (Physical exercise must be carried out properly, correctly, measured and structured (BBTT). Good if it is carried out from an early age, in accordance with the physical medical condition and does not cause any detrimental effects. Correct if it is carried out in stages, namely starting with the competition, continuing with the core activities and ending with cooling. Measured if done by paying attention to the heart rate in other areas and in other zones (65-70% of the maximum heart rate = 220-age). It is regulated if done with a frequency of 3-5 times a week with a minimum duration of 150 minutes / week with a break between the days of the week. For the addition of muscle mass, light load training is needed (Dynamic Strength Training); and (3) sleep patterns without rest (lack of sleep can cause the leptin hormone to be disturbed so that the leptin levels are uncontrolled. If the quality (6-8 hours) and quality of a person's sleep are not appropriate, it will affect the balance of various hormones which ultimately trigger obesity. Some hormones that are disturbed include: cortisol, leptin and ghrelin).

6. CONCLUSION

Being overweight is also important because someone who is overweight has the risk of experiencing several chronic diseases such as hypertension, diabetes mellitus and heart disease along with their complications. It is important for mothers to maintain a healthy and nutritious diet, physical activity and sufficient rest to maintain normal health.

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