The Role of Women in Managing Protein Food in Households of Stunting Case in Kulonprogo

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Abstract: Food is a basic need of human life, so any problems around food are very complex. One of the things that have changed is the awareness of protein consumption, both animal and vegetable sources. Lifestyle changes also contribute to changing people's consumption behavior at various social levels. In addition, the role of women in family food management, especially decision-making in purchasing, serving, and consuming food is also influential. Economic limitations are a problem in fulfilling nutrition or diverse food consumption habits, families with stunted toddlers tend not to like diverse foods, especially vegetables and foods derived from protein. Stunting is usually also found in families whose protein consumption is relatively low, either animal protein (meat, eggs, milk, etc.) or vegetable protein (tofu, tempeh, etc.). Kulonprogo is a district in Daerah Istimewa Yogyakarta (Yogyakarta Special Region) that participates in efforts to prevent stunting. According to the 2019 Indonesian Toddler Nutrition Status Survey (ITNSS) data, the stunting rate in Yogyakarta Special Region was 21.0 percent and in 2021 it fell by 17.3 percent. Efforts need to be made to reduce this condition from year to year. This study seeks to approach the problem-solving of this condition. The purpose of this study was to analyze the role of women in managing protein food in households with stunting cases. The study was approached with the behavior of women in purchasing animal and vegetable protein foods in Kulonprogo. The result of the research showed that together the factors of household's income, women's income, women's age, women's education, number of household members, number of children under five in the family, and information dummy had a significant effect on protein consumption by 52.4% and 47.6% influenced by other factors outside the model. Partially, the most influential factors in protein consumption are household's income and women's income.

Keywords: individual, organizational, importance of system capacities

1. Introduction

Protein is a very important nutrient because it is most closely related to life processes. Proteins are formed from a variety of amino acids that can be classified as essential. Essential amino acids are amino acids that cannot be produced by the body and can only be obtained through the food we eat. In addition, protein is also used for the growth and repair of cells. Sufficient protein will be able to perform its function in the growth process [1]. Protein is needed by humans to build new tissue and maintain existing tissue. Lack of protein can cause malnutrition which in the long term will have an impact on decreasing the quality of human resources (Setiawan in [2]).

Lack of protein consumption and changing diet is one of the causes of malnutrition in Indonesia. Over the past 20 years, a third of children under five are still malnourished stunting, wasting, or overweight, while the other two-thirds are at risk of suffering from

malnutrition and disguised hunger due to poor food intake. Millions of Indonesian children and youth still suffer from stunting due to malnutrition [3]. Stunting or commonly referred to as short toddlers is a condition of failure to thrive in children caused by chronic malnutrition which results in the child's body is too short for his age [4]. Stunting is important to deal with because it is related to the quality of human resources. Stunting in children reflects the condition of failure to thrive in toddlers. Stunting itself is a condition of failure to thrive in children under five years of age due to chronic malnutrition and repeated infections in the first 1000 days (HPK). Stunting not only inhibits physical growth but will also inhibit cognitive development which will affect the level of intelligence and productivity of children in the future [5]. Based on data from the Indonesian Toddler Nutrition Status Survey (SSGBI) in 2021, the prevalence of stunting in Indonesia is 24.4 percent, or around 5.33 million children under five. Although the stunting rate has decreased, from the previous 26.92 percent in 2020, stunting is still a serious problem that is still being prevented to create competitive human resources. In addition, Indonesia's stunting rate is still higher than the tolerance limit set by WHO, a maximum of 20 percent.

In the household, the behavior to consume an item, including food sources of protein, is influenced by several things. These include prices, income, and household preferences for goods to be consumed. The preferences of each household will be different depending on the location of the area of residence, the education level of the housewife, the number of family members, habits, culture, and others [6]. In deciding to do consumers, several things influence consumer behavior, namely: 1) environmental influences consisting of culture, social class, family, and situation. Environmental conditions are very influential in the formation of individuals or groups to consume protein to fulfill nutrition. 2) individual differences and influences from motivation and involvement, knowledge, attitudes, personality, lifestyle, and demographics. Individual differences are internal factors that influence behavior. 3) psychological process which consists of processing information. learning, and changes in attitudes and behavior [7].

The above factors make the role of women in food selection and management and processing very important and influenced by the above factors. Household's income which is the main source of livelihood in the family is very influential. The higher the household's income, the more diverse a woman in the family will be in managing family food. The level of education of women is also very influential in the selection and management of household foodstuffs. The higher the education level of a woman, the more information knowledge about food management, so that the diversification of food ingredients is more diverse. Riyadi [8] states that the higher the education and knowledge a person has, the higher the awareness to fulfill a balanced consumption pattern and fulfill nutritional requirements and be selective with food safety. The same applies to women's income levels. The higher the income level of the woman, the more diverse the food consumed at the household level. This can happen because the woman is freer to choose, buy and manage to serve it to her family

To achieve balance and fulfill nutritional needs, it is necessary to strengthen local food production that contributes to stunting prevention. The Special Region of Yogyakarta is one of the provinces that participate in efforts to prevent stunting. According to the 2019 Indonesian Toddler Nutrition Status Survey (SSGBI) data, the stunting rate in Yogyakarta Special Region was 21.0 percent and in 2021 it fell by 17.3 percent. This is related to the lack of access to food utilization to fulfill the nutrition of pregnant women and toddlers, especially for the middle to lower economic community. Various efforts continue to be made to prevent stunting so that the prevalence of stunting under five continues to decline. This study will describe consumer behavior, especially women, in purchasing protein foods, both animal and vegetable, as an effort to fulfill nutrition to reduce the condition of stunting cases in toddlers in Kulonprogo, Yogyakarta Special Region.

1.1. Research objectives

This research aims to 1) analyze the factors of household's income, women's income, women's age, women's education, number of household members, number of children under five in the family, and dummy information on protein consumption in households with stunting cases in Kulonprogo, and 2) analyze the role of women in managing protein foods in households with stunting potential case in Kulonprogo regency.

2. Method

The research location was carried out purposively, namely based on certain considerations according to the research objectives. The study was conducted in Kulonprogo Regency, Special Region of Yogyakarta, with the consideration that the stunting rate in Kulonprogo was still above 10% based on data from the Indonesian Toddler Nutritional Status Survey. In addition, the condition of the topography of Kulonprogo has many remote hilly mountains so access to food sources is low.

This research approach uses descriptive quantitative research methods. Quantitative methods are used as scientific methods because they meet concrete, objective, measurable, rational, and systematic scientific principles. The descriptive method is a method to find out the value of one or more variables used to explain, predict, and control a symptom [9]. This method is used to describe, and create a systematic, factual, and accurate picture of the facts, nature, and relationships between the phenomena studied [10].

The data collection technique was carried out using triangulation techniques, namely data collection with a triangular study which in its operational implementation was carried out including semi-structural interviews with observed respondents, forum group discussions (FGD), and direct survey observations in the field using the quota sampling method. Each sub-district in Kulonprogo was randomly sampled from the list of families with stunting from the Kulonprogo District Health Office. The total sample of 30 is expected to represent the condition of the household or family population in Kulonprogo who has stunting cases.

$$Y_i = b_0 + b_1\,Ih + b_2\,If + b_3\,Af + b_4\,Ef + b_5\,S + b_6\,JB + b_7\,DI + \mu \qquad (1)$$

Where:

Yi	= Consumption of protein food at the household level (Rp/capita/year)
i	= 1, 2, …, n
b₀	= Constant
b₁	= The coefficient of the i-th variable
Ih	= Household's Income (Rp/year)
If	= Women's Income (Rp/year)
Af	= Female's Age (years)
Ef	= Women's Education (years)
S	= Number of household members (people)
JB	= Number of children under five in the family (people)
DI	= Dummy information
DI	= 0, information obtained from print media
DI	= 1, information obtained from electronic media
μ	= Error rate

3. Results and Discussion

The role of women is very important in efforts to diversify food at the household level. Women or mothers usually plan, manage, process and serve their families. The estimation results obtained show that together, household's income, women's income, women's age, women's education, number of family members, number of children under five, dummy information, distance from house to the nearest market, distance from house to nearest shop/minimarket have a significant joint effect. -same as indicated by the significance value of the F test of 0.000 (0.001 < α = 0.05). The eight variables above also affect protein consumption in Kulonprogo by 52.4% which is indicated by the Adjusted R2 value of 0.524 and the value of 47.6% is influenced by other factors outside the model. Table 1 showed of regression analysis of the effect of household's income, income women, women's age, women's education, number of family members, number of toddlers, information dummy, distance from house to nearest market, and distance from house to shop/minimarket on protein consumption in Kulonprogo.

Table 1. Regression analysis of factors affecting protein consumption in household stunting case in Kulonprogo

Model	Unstandardized Coefficients B	Sig. t
Constant	662863,037	0,280
X1 (Household's income)	0,304	0,004*
X2 (Women's Income)	0,208	0,045*
X3 (Women's Age)	-9937,637	0,183
X4 (Women's Education)	-5296,682	0,807
X5 (Number of Family Members)	51241,052	0,279
D1 (Number of Toddlers)	63083,724	0,806
X6 (Distance from house to the nearest market)	-65065,535	0,266
X7 (Distance from house to the nearest shop/minimarket)	12757,300	0,773
Adj. R² = 0,524		
Sig. F = 0,001		

Source: Primary data analysis, 2022

*= significant (5%)

Partial estimation results based on regression analysis of each variable separately, it can be seen that the factors that have a significant effect on protein consumption in the family of stunting cases in Kulonprogo are household's income and women's income. It can be seen by looking at the significance of t, that the two variables have a value less than alpha (0.05) so from the other variables only these two variables affect protein consumption in Kulonprogo separately. The estimation results can explain that protein consumption in the Kulonprogo area is influenced by household's income and women's income, which illustrates that household's income and women's income in Kulonprogo Regency is quite low. Household's income and women's income are important factors in fulfilling food in the family because one source of livelihood in the family comes from income. The inability to fulfill food ingredients optimally due to a fairly low income can affect the role of women as food managers in the family to reach various foodstuffs or fulfill nutrition in the family, especially protein nutrition. This certainly gives the value of protein consumption from the Kulonprogo area condition still low through Figure 1.
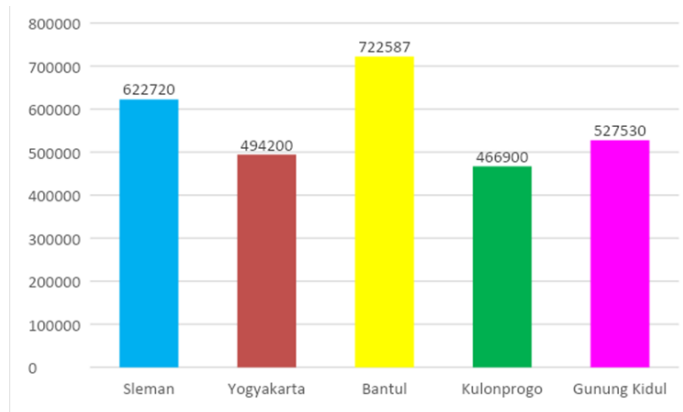
Figure 1. Protein consumption per regency/city in Yogyakarta Special Region (Rp/Month/Household)

The graph in figure 1. showed that protein consumption in Kulonprogo is still low which is the impact on household's income and women's income which is quite low. The low consumption of protein certainly gives rise to stunting in every household that is less able to meet the nutrition in their family. The role of women as food managers in the family to fulfill food and nutrition in the family is based on the size of household's income and women's income which affects the household budget for food. The greater the household's income and women, the more flexible women or mothers as food managers in the family are to choose food to meet nutrition in the family. The availability of sufficient and nutritious food is an important thing in the family to form a family that is free from stunting. Income of Household is the major factors that influencing the stunting case in Kulonprogo area. One of the steps that can be taken to be a solution is to increase household and women's salary. Many kinds of activities likely have a garden or special land for planting crops that produce food as additional food for the family and the other hand the government can make empowerment of stunting household. The dissemination program and accompany them to made the food from local resource, processing many kinds food for their household and also processing the food that available to sell the other in order to get more income. Collaboration between the government, household, and the volunteers in non-profit organization can improve the economic and health condition of household in Kulonprogo Area.

4. Conclusion

Factors of household income, women's income, women's age, women's education, number of household members, number of children under five in the family, and dummy information have a significant influence on protein consumption in the household of stunting cases in Kulonprogo, Yogyakarta Special Region.

The role of women's income is very potential effort as a provider of protein food in the household, while the age of women, women's education does not play a significant role. This can be interpreted that poverty and low income of household are the main caused of stunting cases in Kulonprogo, Yogyakarta Special Region.

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