

## Social economic status, nutrition knowledge on food consumption behavior of poor family in Maros Regency, South Sulawesi – Indonesia

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### ABSTRACT

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This study aims to find the effect of knowledge about nutrition on poor families in Maros Regency, South Sulawesi - Indonesia. To find the effect of socioeconomic status on food consumption behavior of poor families in Maros Regency. This type of research is ex-post facto using a quantitative approach with a survey method. The design or research model on the effect of exogenous variables, namely Socio-Economic Status is given a symbol (X1), Knowledge about nutrition is given a symbol (X2), and endogenous variables, namely Food Consumption Behavior are given a symbol (Y). The research locations are in Tukamasea Village, Mattoangin Village, Minasa Baji Village, and Alatengae Village, Bantimurung District, Maros Regency, South Sulawesi Province. More specifically, the main locus of research is poor families in 4 (four) villages in Bantimurung District, Maros Regency. The data obtained were analyzed using descriptive statistical analysis and inferential statistical analysis. The number of samples in this study was 200 households. The data analysis technique used is Path Analysis technique. The results of this study indicate that there are (1) there is an influence of socioeconomic status on consumption behavior, there is a direct and indirect effect of knowledge about nutrition on the food consumption behavior of poor families (direct influence), and knowledge about nutrition has an effect on lifestyle (indirect effect).

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## INTRODUCTION

Adequacy of food and nutrition is very important because it is closely related to health, especially for pregnant and lactating mothers and children under five years old, physical, mental, cognitive ability, productivity and achievement growth and development (El Bilali et al., 2019; Lal, 2020; Mohanty et al., 2019). Food sufficiency depends on the ability of the population to buy food in

order to meet household needs that are balanced according to the level of household income (Baer-Nawrocka & Sadowski, 2019; Van Berkum et al., 2018). In today's modern life, the philosophy of eating has undergone a shift, where eating is not just to be full, but the main focus is to achieve optimal levels of health and fitness (Fanzo, 2019). The main function of food for humans is to meet the body's nutritional needs. The function of such food is known as the primary function. Not only having a primary function, food ingredients should also have a secondary function, which is to have a good appearance and taste (Setiawan, 2020; Supriani, 2019). Foodstuffs that are now starting to be in great demand by consumers are not only those with good nutritional composition and attractive appearance and taste, but also must have certain physiological functions for the body (McClements & Grossmann, 2021; Rusu et al., 2020; Triyono et al., 2019). Such a function is called a tertiary function, for example to lower blood pressure, lower cholesterol levels, lower blood sugar levels, and others. The higher the level of prosperity and awareness of one's health, the demands on the three functions of these foodstuffs will also be higher (Astawan et al., 2018; Zhu et al., 2011).

Several studies have investigated the relationship between socioeconomic status, nutritional knowledge, and food consumption behavior among different populations, shedding light on similar issues to those examined in Maros Regency. For instance, a study by Drewnowski and Eichelsdoerfer (2010) found that lower socioeconomic status is significantly associated with less healthy food consumption patterns. Individuals with limited financial resources tend to prioritize cost over nutritional quality, leading to a higher intake of energy-dense but nutrient-poor foods. This behavior is driven by the economic constraints that limit access to healthier food options, which are often more expensive. Consequently, poorer families are at a greater risk of developing nutrition-related health issues, such as obesity and micronutrient deficiencies, which can further perpetuate the cycle of poverty and poor health. Additionally, a study conducted by Darmon and Drewnowski (2008) highlighted the impact of nutritional knowledge on dietary choices. They found that individuals with higher levels of nutritional knowledge were more likely to make healthier food choices, regardless of their socioeconomic status. This suggests that educational interventions aimed at increasing nutritional awareness can have a positive impact on food consumption behaviors. The study emphasized the need for targeted nutrition education programs that can equip individuals, particularly those from lower socioeconomic backgrounds, with the knowledge necessary to make informed dietary decisions. By improving nutritional knowledge, it is possible to mitigate some of the adverse effects of economic constraints on diet quality, thereby enhancing overall health outcomes for disadvantaged populations. These findings underscore the importance of addressing both socioeconomic and educational factors to improve food consumption behaviors and nutritional status among poor families. They highlight the need for comprehensive strategies that combine economic support with educational initiatives to promote healthier eating habits and ultimately improve public health.

Poverty is the inability from an economic point of view to meet basic food and non-food needs as measured from the expenditure side (BPS, 2017). One of the consequences of poverty is the inability of families to meet the food needs of their family members in good quantity and quality, so they are at risk of food and nutrition insecurity (Chaudhuri et al., 2021; Ettinger de Cuba et al., 2019; Keith-Jennings et al., 2019). Maros Regency itself noted that the population of Maros Regency reached 140,620 people and for family heads it reached 35,155 families (POKJA, 2016). BPS Maros Regency in 2015 and there was a significant increase in 2016 which reached 37,319 households and for the head of the family. The number of poor people recorded 29,286 people or about 9 percent. The large ratio of the poor population in Maros Regency is enough to make us sad and also a contributor to poverty in South Sulawesi and nationally (BPS Kabupaten Maros, 2018). Furthermore, Maros Regency in 2016 the number of babies born alive as many as 5,650 found 203 babies (3.6%) who experienced LBW (low birth weight) (BPS Kabupaten Maros, 2016). On the other hand, the number of unemployed workers also increased from 6,768 people in 2014 to 10,907 people in 2016. This was due to the number of factories and business premises that went out of

business so that many workers were laid off (BPS Kabupaten Maros, 2018). This is the cause of the large poverty ratio in Maros Regency.

Healthy eating behavior is a daily eating behavior that is in accordance with the nutritional needs of each individual for a healthy and productive life (Klusmann et al., 2019; LaCaille, 2020; Marty et al., 2018). To be able to achieve nutritional balance, everyone must consume at least one type of food from each food class, namely carbohydrates, animal and vegetable protein, vegetables, fruit and milk or what we often call the four-five perfect diet (Robertson et al., 2018; Rozi et al., 2023; Serra et al., 2019). In addition to healthy eating behavior, there are also unhealthy eating behaviors that will have many impacts on life (Bobak, 2005). Based on these problems, researchers will conduct research in the field of nutrition related to food consumption behavior that has not been widely disclosed. This has prompted researchers to conduct experimental research related to socioeconomic status, knowledge of nutrition, and food consumption behavior among poor families in Maros Regency, South Sulawesi. The aims of this study are to: Analyze the effect of socioeconomic status on food consumption behavior of poor families in Maros Regency, Analyze the effect of knowledge about nutrition on food consumption behavior of poor families in Maros Regency, South Sulawesi – Indonesia

## RESEARCH METHOD

This type of research is ex-post facto using a quantitative approach with a survey method (Brannen, 2017; Scott-Baumann, 2008; W. Creswell, 2013). The research design on the effect of exogenous variables, namely socioeconomic status is given a symbol (X1), Knowledge about nutrition is given a symbol (X2), and endogenous variables, namely Food Consumption Behavior are given a symbol (Y). The location of this research is the community in Mangaloreng Village, Alatengae Village, Tukamasea Village, and Baruga Village, Maros Regency, South Sulawesi Province. More specifically, the main locus of research is poor families in Mangaloreng Village, Alatengae Village, Tukamasea Village, and Baruga Village, Bantimurung District, Maros Regency, South Sulawesi.

The population of this study is poor families in Mangaloreng Village, Alatengae Village, Tukamasea Village, and Baruga Village, Maros Regency, South Sulawesi, with a population of 16716, and a population of 970 poor families. Based on the analytical tool that will be used, the determination of the number of representative samples uses slovin's formula. The population size is 970, using an error rate of 5%, the number of samples obtained is 401 samples and is rounded up to 400 samples. Furthermore, Hair (Rosseel, 2020) also states that the appropriate sample size for the Structural Equation Model (SEM) is between 100-200 samples. With reference to this opinion and based on the considerations that have been stated above, the number of samples used in this study by dividing by half the number of samples that have been calculated is 200 households.

Operational definition, Food Consumption Behavior of Poor Families, Food consumption behavior of poor families is an activity or human activity in meeting the needs of biological and water resources (food and beverages) that do not or lack the ability to meet their needs. Indicators of food consumption behavior of poor families are socio-cultural, personal-psychological, and decisions. Socio-Economic Status, Socio-economic status is a description of the condition of a person or a society from an economic and social perspective, including education, income, occupation, status, status and form of house/residence, and the amount of expenditure. Knowledge of Nutrition, Knowledge of nutrition is all information obtained through observation, experience and learning related to the basic message of balanced nutrition, food and nutrition, and food security which includes concepts, procedures, and principles based on criteria and methods regarding food availability, the right to food, and the use of food. Research Instruments. Socio-economic status instrument. Socio-economic status instrument was developed in the form of a measurement scale with a questionnaire. The statements from these are given a score starting from 6, 9, 12, 15, and 18, respectively. Knowledge Instrument on Nutrition, Knowledge instrument on nutrition in the form of multiple choice (optional). The score used is zero (0) if the answer is wrong

and one (1) if the answer is correct with low, medium, and high categories. Food Consumption Behavior Instrument, Food consumption behavior instrument was developed in the form of a measurement scale with a Likert scale questionnaire, namely: Always (5), Often (4), Sometimes (3), Rarely (2), Never (1). The five statements from the five aspects were given a score of 5, 4, 3, 2, 1 for positive statements, while for negative statements they were given a score of 1, 2, 3, 4, 5 The food consumption behavior instrument grid.

Validity and Reliability, The research instrument before being used was tested by analyzing the items to obtain valid items. The formula used to analyze the validity of the items or tests is the Point Biserial Correlation. For the analysis of non-test instrument items, the Product Moment Correlation ( $r$ ) formula is used. Furthermore, the reliability test of the instrument measurement results was also conducted. The criteria for determining item validity is to look at the correlation coefficient ( $r_{xy}$ ) obtained. An item is considered valid (valid) if the probability value for the relevant correlation coefficient is greater than or equal to the critical value of the  $r$  table for the chosen significant level, which is 0.05.

Data analysis technique, The data analysis technique used is path analysis technique. Path analysis is a technique developed from multiple linear regression. This technique is used to test the contribution (contribution) indicated by the path coefficient on each path diagram of the causal relationship between variables  $X_1$ ,  $X_2$ , and their impact on  $Y$

## RESULTS AND DISCUSSIONS

Description of research on socio-economic status, knowledge of nutrition and food consumption behavior of poor families in Maros Regency, South Sulawesi Indonesia, The variable of socio-economic status of poor families in Maros Regency shows a low category. This happens because the poor families have a low economic level (poor) and are included in a low social status as well. Furthermore, the knowledge variable about nutrition of poor families in Maros Regency is in the low category. This happens because poor families have a low level of education, namely only completing Elementary School (SD) and Junior High School (SMP). Continuing for the variable of food consumption behavior of poor families in Maros Regency in the low category. This happens because of the behavior of poor families who tend to ignore eating foods that do not meet their nutritional needs, leaving food open without cover so that flies come over, and smoking habits instead of setting aside money to buy nutritious food. The influence of socio-economic status ( $X_1$ ) on the Food Consumption Behavior of Poor Families ( $Y$ ) in Maros Regency, South Sulawesi Indonesia

Socio-economic status of poor families in Maros Regency has a positive effect on food consumption behavior in Maros Regency. Socio-economic status indicators which include recent education, permanent employment, income, status of position, status of house/residence, form of house/residence, and amount of monthly expenditure have an effect on food consumption behavior. The higher the socioeconomic status of the family, the better and higher the behavior of food consumption. All of the necessities of life are met, the level of welfare is getting better, and an adequate standard of living can make a person behave well and intelligently in food consumption.

One indicator of socioeconomic status that plays an important role in determining the standard of living of poor families in Maros Regency is the latest education, permanent employment, and income. Education is very important in social life. Thus, the level of employment and income are factors that correlate with a person's level of education in the community. By having a job and sufficient income, a person will earn better, especially if it is driven by the education factor, then a person will be able to behave well.

Education is actually all ethical, creative, systematic, and intentional actions assisted by scientific methods and techniques directed at achieving certain educational goals, thus education within the framework of socioeconomic status associated with food consumption behavior is an effort to lead to the achievement of developments that can stimulate rational, creative, and

systematic way of thinking. Education can expand knowledge, increase abilities, and potential and make a person more sensitive to any symptoms that arise because education can foster and shape a person's mental attitude and behavior, increase one's knowledge, stimulate someone to think logically.

In general, the education taken by poor families in Maros Regency is in the low category, that is, they only finished elementary school (SD) and junior high school (SMP). This low level of education is a factor in food consumption behavior which is far from ideal. Of course various problems arise including criminal acts. Low education is the root of social and behavioral problems in society. Education should be used as a humanizing process that can change their quality of life for the better. Education will also shape humans into civilized and moral beings. The type of work contributes to a person's behavior in society, as well as income. Income will affect a person's socioeconomic status, especially in a materialist and traditional society that values high socioeconomic status over wealth. A person's income is the money received by a person in the form of salary, rent, interest, profit, and so on. The permanent jobs of poor families in Maros Regency generally only work as household assistants and salespeople. Of course, this work does not provide a decent (high) income, especially in the industrial era 4.0, the level of community needs is getting higher and of course it is tearing the pockets of income.

To mix and match quality food consumption behavior, of course, it is necessary to improve the living standards of poor families in Maros Regency through minimizing low education in the sense that the government needs to seek education up to High School (SMA) or even Diploma level for free. Although it has not been promoted by the government, it is also not appropriate for poor families in Maros Regency to stand idly by not wanting to continue with higher education due to limited funding. A high spirit of work ethic is needed in order to increase the income of poor families. Synchronization of the government in providing guidance to providing job opportunities is needed to be able to raise the economic status of poor families in Maros Regency.

To improve food consumption behavior, the government must first know about the food consumption behavior of poor families in Maros Regency. With certain methods, it can be applied to measure food consumption. One method of measuring food is through the food recall method. In this method, the respondent, mother or caregiver (if the child is still small) are asked to tell everything they ate and drank during the past 24 hours (yesterday). Usually starting from when he woke up yesterday morning until he took a rest at night or it could also start from the time when the interview was conducted backwards for a full 24 hours. For example, the officer came at 07.00 to the respondent's house, then the consumption that was asked was starting at 07.00 (at that time) and going back until 07.00, the previous morning. Interviews were conducted by trained officers using a structured questionnaire.

The important thing to note is that with a 24-hour recall the data obtained tends to be more qualitative in nature. Therefore, to obtain quantitative data, the amount of individual food consumption was asked carefully using URT tools (spoons, glasses, plates, etc.) or other measurements commonly used on a daily basis. If the measurement is only done once (1x24 hours), then the data obtained is less representative to describe individual food habits. Therefore, the 24-hour recall should be done repeatedly and not consecutive days. The effect of knowledge about nutrition on food consumption behavior of poor families in Maros Regency, South Sulawesi – Indonesia.

The knowledge possessed by both individuals and communities has a direct effect because awareness of their knowledge affects how the actions of their behavior have a direct impact on their health. Individuals or community groups who have high environmental knowledge are aware of and understand how the environment affects the occurrence of a disease, environmental sustainability, and environmental quality. Therefore, people with higher knowledge tend to behave positively in increasing food consumption behavior because their knowledge of nutrition can reduce or reduce the level of transmission of various health problems and become a model or

pattern of quality food consumption so that it can support various aspects, especially health. Thus, it is very clear that knowledge does have a positive influence and is closely related in increasing the food consumption behavior of poor families. The reality from the interview results is that with higher formal education, respondents have deeper abilities and knowledge in understanding the process and mechanism of disease outbreaks and their relationship with the quality of nutritional intake. In contrast, respondents with lower education tend to have very minimal understanding of the relationship between the quality of nutritional intake and the mechanisms and processes of disease outbreaks. In order to improve food consumption through behavior improvement, an important aspect that needs to be improved is knowledge. Implementation of improvements or improvements can be done through improving the quality of formal and non-formal education.

Based on this analysis, it can be explained that the lifestyle of a person or poor family in food consumption has a close relationship or affects the behavior of a person or group of people towards the food consumption behavior of poor families. Someone who knows a problem will affect his behavior. The fact in the field facts that during the research, it can be seen that respondents who have low emotional perceptions and tendencies in managing nutrition have low behavior in improving the quality of food consumption as well. They still choose food ingredients that are not suitable for consumption, both in terms of nutritional content and texture and source. In fact, with knowledge about nutrition, poor families can choose food that has sufficient nutritional content to adapt to a healthy lifestyle such as not smoking and consuming alcoholic beverages (traditional) and supported by socio-economic status factors as well

## CONCLUSION

The research conducted on the socio-economic status, knowledge of nutrition, and food consumption behavior of poor families in Maros Regency, South Sulawesi, Indonesia, underscores the intricate interplay of socio-economic factors and nutritional knowledge in shaping dietary behaviors. The study reveals a significant correlation between the low socio-economic status of poor families, characterized by limited education, employment opportunities, and income, and their suboptimal food consumption behavior. Moreover, it emphasizes the pivotal role of education in enhancing nutritional awareness and fostering healthier dietary choices among disadvantaged communities. By recognizing the need to improve educational opportunities, alongside promoting nutritional knowledge and socio-economic empowerment, policymakers can pave the way for enhancing the food consumption behavior and overall well-being of poor families in Maros Regency. Future research should focus on longitudinal studies to assess the long-term impact of combined interventions targeting both socio-economic empowerment and nutritional education on food consumption behavior in poor families. Investigating the effectiveness of community-based programs that integrate vocational training, microfinance opportunities, and comprehensive nutrition education could provide valuable insights into sustainable strategies for improving dietary habits and overall well-being. Additionally, exploring the role of cultural factors and local food systems in shaping dietary behaviors can help tailor interventions to be more culturally relevant and accepted. By adopting a holistic approach that addresses the multifaceted determinants of food consumption behavior, future research can contribute to the development of more effective policies and programs aimed at alleviating food insecurity and enhancing the health of disadvantaged populations.

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