

## The Relationship Between Eating Behaviour and Diseases Experienced by Malay Families in Medan

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### ABSTRACT

**Background:** Eating behavior is the way a person or group of people choose food and consume it. Unhealthy eating behavior will have an impact on health status. Each region in Indonesia has different eating habits. Eating behavior and habits can be classified as a reflection of the culture and characteristics of the region. The Malay tribe is known by the wider community with a variety of diversity such as culture, art, history to the typical food served. This study aimed to see the relationship between eating behavior and diseases experienced by Malay families in Medan.

**Methods:** This research is quantitative with descriptive correlation approach. This research was conducted in Medan. The population in this study were Malay families living in Medan. The research sample was 177 people using purposive sampling technique. The research instrument used a questionnaire and the data analysis used was Spearman Rho.

**Results:** The results showed 148 respondents (83.6%) had poor eating behavior and 29 respondents (16.4%) had good eating behavior. A total of 145 respondents (81.9%) had a history of disease in the form of obesity, hypertension, gastritis, diabetes mellitus, and arthritis, while 32 respondents (18.1%) had no history of disease. The results of the Spearman rho statistical test obtained a significant number or  $p = 0.000 < (0.05)$ .

**Conclusion:** There is a relationship between eating behavior and diseases experienced by Malay Medan families. Eating foods that contain excessive fat and salt can cause hypertension. Acidic, spicy, fatty and gassy foods can stimulate an increase in lambug acid which causes gastritis. The habit of overeating as well as the habit of snacking on snacks causes a person to be overweight.

### KEYWORDS

*Diseases experienced, Eating behavior, Malay Family,*

## INTRODUCTION

Eating behavior is the way a person or group of people chooses food and consumes it. Good eating behavior is the behavior of daily food consumption in accordance with nutritional needs for a healthy and productive life (Afrina et al., 2019). The results of research by Sugiarto (2019) show that food consumption is related to the incidence of disease experienced by individuals.

Unhealthy eating behavior will have an impact on a person's health status (Afrina et al., 2019). Many health problems are caused by changes in lifestyle, diet, environmental factors, lack of physical activity and stress. Applying an unhealthy diet such as often consuming foods high in fat but

low in fiber is the cause of various diseases in productive age (Siringoringo et al., 2022). Currently, many fast foods contain high fat and sodium, which can trigger various diseases. Eating foods that contain fat and cholesterol such as meat, offal, sweet foods and drinks, foods that contain salt can cause excess cholesterol levels in the blood and can cause heart disease and vascular disease, one of which is hypertension (Siringoringo et al., 2022). Hypertension is one of the diseases that is a health problem worldwide because of its increasing prevalence and its association with cardiovascular disease, stroke, retinopathy, and kidney disease (Utama, F., et al., 2019).

Several studies have shown that factors that can increase blood pressure include excessive salt consumption. In addition, frequent consumption of preserved foods has also been shown to have a significant relationship with the incidence of hypertension (Insani et al., 2021).

Foods such as acidic, spicy, fatty and gassy foods can stimulate an increase in stomach acid which causes gastritis. Fatty foods can also cause gastritis, this is because fatty foods take longer to digest. The fat content must be broken down into smaller particles in order to be absorbed by the small intestine. The longer the food is in the stomach, the longer the stomach will continue to produce stomach acid to help the digestive process. (Asep Barkah & Indah Agustiyani, 2021). Overeating, eating in a hurry, avoiding morning meals, irregular meal times and snacking habits cause a person to become overweight. Consuming foods that contain a lot of fat triggers obesity. Excess fat consumption will be stored in adipose tissue as potential energy. If fat stores exceed 20% of normal body weight, there is a tendency to cause overweight or obesity. Obesity can trigger the risk of diseases such as hypertension, dyslipidemia, impaired liver function where there is an increase in SGOT and SGPT, as well as the formation of gallstones and *diabetes mellitus* (Utama, F., et al., 2019).

Eating spicy foods, acidic foods, drinking tea, coffee and carbonated drinks can cause dyspepsia. Dyspepsia is a collection of symptoms consisting of heartburn, nausea, bloating, vomiting, fullness, and belching. (Sumarni & Andriani, 2019). Acidic and

spicy foods such as chili, pepper, and sharp spices can stimulate the digestive organs and directly damage the stomach wall. Acidic and spicy foods stimulate excessive gastric acid secretion, resulting in dyspepsia (Wijaya et al., 2020).

Every region in Indonesia has different eating habits. Eating behavior and habits can be classified as a reflection of the culture and characteristics of the region. Medan is a city located in the province of North Sumatra and has various ethnic groups with diverse cultures. The majority of Medan's population is Batak, but some other tribes that also live in Medan are Javanese, Chinese, Mandailing, Minangkabau, Karo, Aceh, Sundanese, Tamil and Malay. The Malay tribe is known by the wider community with a variety of diversity such as culture, art, history to the typical food served. Traditional Malay food is quite diverse such as sago noodles, nasi lemak, asam pedas, tarempa noodles, luti gendang, and various other dishes (Soh et al., 2021).

Based on several studies that have been mentioned, this study aims to see the relationship between eating behavior and diseases experienced by Malay families in Medan City.

## METHODS

This research is quantitative with a descriptive correlational approach. This research was conducted in Medan. The population in this study were Malay families living in Medan

## Data Collection

The research sample used was 177 people with purposive sampling technique. The research instrument used a questionnaire and the data analysis used was Spearman Rho.

## Ethical Considerations

This research was conducted after the researchers passed the ethical test from the Health Research Ethics Commission of the Faculty of Nursing, University of Sumatra Utara. Researchers use the principle of autonomy, namely the community (family) who become respondents have the right to decide whether they are willing to become subjects or not without any sanctions and losses, researchers provide complete and detailed explanations and information and are responsible if something happens while conducting research. The community (family) who became research respondents were not discriminated against if they refused to continue the research. Evidence of the willingness of the community (family) to be involved as respondents in the research was signed on the respondent concentration information sheet provided by the researcher before the community (family) was made a research respondent, the anonymity and confidentiality of the sheet was only given a certain number and code. Confidentiality of information was guaranteed by the researcher.

## Data Analysis

The data collected from the questionnaire was processed and analyzed. Data analysis used univariate and bivariate analysis. Univariate analysis aims to describe the characteristics of each research

variable. Bivariate analysis is an analysis conducted on two variables that are suspected to be related or correlated. The test used in this study is spearman rank where  $p < 0.05$  then there is a relationship between eating behavior and diseases experienced by Malay families in Medan. While  $p > 0.05$  then there is no relationship between eating behavior and diseases experienced by Malay families in Medan.

## RESULTS AND DISCUSSION

### Result

The results showed that most of the age range 30-39 years as many as 65 people (37.9%), the last education of elementary school as many as 129 people (72.9%) and fisheries workers (fishermen) as many as 107 people (60.4%) and most respondents have an income per month.

Table 1. Frequency distribution and percentage of respondents based on eating behavior of Malay families in Medan

No	Eating Behavior	Frequency	Percentage
1	Good	29	16,4%
2	Poor	148	83,6%
Total		177	100%

Based on Table 1, it can be seen that the majority of respondents have poor eating behavior, namely 148 families (83.6%).

Table 2. Frequency distribution and percentage of respondents based on diseases experienced by Malay families in Medan

No	Diseases Experienced	Frequency	Percentage
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1	Obesity	20	11,3
2	Hipertension	51	28,8
3	Stroke	0	0
4	Heart Disease	0	0
5	Gastritis	32	18,1
6	Diabetes Melitus	2	1,1
7	Cancer	0	0
8	Arthritis	40	22,6
9	Hearing Impairment	0	0
10	Kidney Disease	0	0
11	Don't have any Diseases	32	18,1
Total		177	100%

Based on table 2, it can be seen that most respondents experienced hypertension, namely 51 respondents (28.8%) and arthritis with 40 respondents (22.6%).

Table 3. Relationship between dietary behavior and diseases experienced by Malay families in Medan

No	Variabel 1	Variabel 2	P-value	R-value
1	Eating Behavior	Diseases Experienced	0,000	0,572

The results of the correlation test between eating behavior and diseases experienced by families was 0.572 with a significance of 0.000 ( $p < 0.05$ ). So it can be concluded that there is a relationship between eating behavior and diseases experienced by Malay families in Medan.

## Discussion

The results showed that out of 177 respondents there were 145 people who experienced disease and 32 other respondents did not experience disease. Based on the results of the study, most respondents had poor eating behavior, namely 148 respondents (83.6%). Parameters for

measuring eating behavior are categorized into four groups, namely food menu, food processing, food portions and meal times. Based on the results of the study, there are diseases experienced by Malay families in Medan, namely obesity totaling 20 respondents (11.3%), hypertension totaling 51 respondents (28.8%), gastritis totaling 32 respondents (18.1%) and diabetes mellitus totaling 2 respondents (1.1%), and arthritis totaling 40 respondents (22.6%). The results of the Spearman rank statistical test obtained a relationship between eating behavior and diseases experienced by Malay families in Medan.

The majority of respondents experienced hypertension, namely 28.8%. Hypertension is one of the diseases that is a health problem worldwide because its prevalence continues to increase (Utama, F., et al., 2019). Eating foods that contain fat and cholesterol such as meat, offal, sweet foods and drinks, foods that contain salt can cause heart disease and vascular disease, one of which is hypertension (Siringoringo et al., 2019). In accordance with research conducted by (Jingga & Indarjo, 2022) showed that there was a significant relationship between high salt consumption and the incidence of hypertension with a p-value of 0.040. Research conducted at the Kamonji Health Center working area refugee camp, showed the results of 78 respondents whose diet was not good there were 31 respondents (39.3%) who suffered from hypertension, bivariate analysis showed p-value = 0.038 ( $p < 0.05$ ) which means that there is a relationship between diet and hypertension (Sagita et al., 2019).

Consuming seafood such as shrimp, squid, mussels and marinated fish are more at risk of hypertension, as they are foods with high fat and salt content. Excessive salt consumption can reduce the width of arterial vessels, which causes the heart to work harder to pump a larger volume of blood through the narrowed vessels (Nafi & Putriningtyas, 2023). Research by Sekti and Fayasari (2019) shows that unhealthy eating behavior in the form of decreased consumption of fruits and vegetables can also cause the body to experience nutritional deficiencies such as vitamins, minerals, and fiber. In addition to the body experiencing malnutrition, low consumption of fruits and vegetables results in the accumulation of fatty plaques in blood vessels due to saturated fats and trans fats, so that blood vessels constrict and require greater pressure to circulate blood throughout the body which causes hypertension.

The second most common disease experienced by families is arthritis, which is 22.6%. Arthritis is a metabolic disorder characterized by increased uric acid levels in the blood (hyperuricemia). Consumption of foods with high purine content can cause purines to oxidize into uric acid (Ansjarullah et al., 2020). Excessive purine intake causes the accumulation of purine crystals to accumulate in the joints (Hamidi nizar syarif, et al, 2021). Types of foods that contain a lot of purines are liver, sardines, sausages, duck brains, birds, tripe, peas and melinjo seeds. Research conducted in the Toili II health center work area, there is a relationship between the type of food consumed and the incidence of arthritis, of the 41

respondents who had gout, 33 respondents consumed risky foods such as meat and beans (Junaidin, J., et al, 2023). Research conducted in the Telaga Health Center Working Area, Gorontalo Regency also shows that there is a significant relationship between diet and uric acid levels as evidenced by respondents who have high uric acid levels dominated by respondents with poor diet (Dungga, 2022).

The results showed that 32 respondents experienced gastritis. Gastritis is a disease caused by inflammation of the gastric mucosa (Smith et al., 2019). An irregular diet makes it difficult for the stomach to adapt, if it continues for a long time it will cause excess stomach acid and result in irritated gastric mucosa (Sumbara, S., & Ismawati, Y., 2020). Eating spicy foods, tea, coconut milk and fatty foods, drinks containing gas, foods containing gas, acidic foods, and coffee have a risk of causing gastritis (Lusiana, A., et al, 2020). Research conducted by Diliyana & Utami, (2020) in the Balowerti Health Center Working Area, Kediri City shows that there is a significant relationship between diet and the incidence of gastritis. Research conducted by also shows that there is a significant relationship between diet and the incidence of gastritis, as evidenced by out of 70 respondents with a poor diet there were 31 who experienced gastritis (Angelica, Y., & Siagian, E., 2022).

The results showed that 20 respondents were obese. Consuming foods that contain a lot of fat triggers obesity. Overeating habits and snacking habits cause a person to become overweight

(Utama, F., et al., 2019). The results of research by Fatmawati (2019) state that there is a significant relationship between the intake of sugary drinks with body weight and the risk of obesity. Excessive sugar consumption can also cause energy imbalances with the body fat regulation system which has an impact on obesity.

## LIMITATION

This research only looks at how the relationship between eating behavior and diseases experienced by Malay families, it does not explain in more detail what kind of eating behavior causes specific diseases.

## CONCLUSIONS & SUGGESTIONS

Based on the results of the analysis and research objectives, it can be concluded that there is a relationship between eating behavior and diseases experienced by Malay families in Medan City. Eating behavior in Malay families in Medan is mostly not good, namely 83% with a total of 148 families and most respondents experience hypertension by 28.8% with 51 respondents and arthritis by 22.6% with 40 respondents.

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