



## The Relationship Between Diet and Gastritis in Adolescents

Irpan Ali Rahman<sup>1</sup>, Adi Nurapandi<sup>1</sup>, Endrian Mulyadi J.W.<sup>1</sup>, Rudi Kurniawan<sup>1</sup>, Ginda Risgia<sup>1</sup>  
<sup>1</sup>STIKes Muhammadiyah Ciamis, Indonesia

Correspondence author: Irpan Ali Rahman

Email: [van.vinnot@gmail.com](mailto:van.vinnot@gmail.com)

address : Jl. K.H. Ahmad Dahlan No. 20, Ciamis, Jawa Barat, 46216, Indonesia

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### ABSTRACT

Gastritis is a digestive tract problem that is most often found in daily life and a health problem that is often encountered. Habits of poor eating and consuming unhygienic food are risk factors for gastritis. Irregular eating patterns are caused by busy teenagers who are outside the home. The impact of gastritis can interfere with the patient's daily activities. Objective: This study aims to determine the relationship between diet and the incidence of gastritis in adolescents in the work area of the Cigugur Public Health Center, Pangandaran Regency, in 2021. Methods: The research method used is a quantitative analysis using a cross-sectional approach. The population in this study were all adolescents aged 16–19 years in the work area of the Cigugur Health Center, Pangandaran Regency, as many as 4,798 people. Samples were taken using the proportional random sampling technique to obtain a sample of 98 people. Results: The results of the study showed that the diet in adolescents, most of the respondents, namely 60 people (61.2%), had a bad diet, and the incidence of gastritis in adolescents, most of the respondents, 56 people (57.1%), had gastritis. There was a relationship between the pattern of eating and the incidence of gastritis in adolescents because the value of  $p > 0.05 > 0.000$  Conclusion: There is a significant relationship between diet and the incidence of gastritis in adolescents.

**Keywords:** Diet, Gastritis, Teenager

### Introduction

Eating patterns in an area can change according to changes in several factors or local conditions, including cultural factors, religion/beliefs, socioeconomic status, things you like or don't like, hunger, appetite, satiety, and health. Talking about food means talking about the digestive tract, starting with the mouth, esophagus, stomach, small intestine, large intestine, and anus. Each part of the food tract can cause various kinds of diseases due to the wrong diet. (Direktorat P2PTM, n.d., 2019)

Gastritis is a digestive tract problem that is most often found in everyday life and is often considered a mild disease, but it can damage stomach function and can increase the risk of developing gastric cancer and causing death. (Alodokter, n.d, 2022)

The world health research agency World Health Organization (WHO) conducted a review of 8 countries and got several percentage results on the incidence of gastritis in the world, starting with the country with the highest incidence of gastritis, namely America with a percentage reaching 47% followed by India with a percentage of 43. %, then several others such as England 22%, China 31%, Japan 14.5%, Canada 35%, France 29.5%, and especially Indonesia 40.8%.(Kemenkes, 2019.)

The incidence of gastritis in Indonesia is quite high. The results of research and observations conducted by the Ministry of Health of the Republic of Indonesia have a high incidence of gastritis in several cities in Indonesia, reaching 91.6%, namely in the city of Medan, then in several other cities such as Surabaya 31.2%, Denpasar 46%, Jakarta 50%, Bandung 32.5%, Palembang 35.35, Aceh 31.7%, and Pontianak 31.2%.(Zakaria, 2019)

Based on the ten most diseases in the hospital (Rahman, 2022) in Indonesia in 2019 is gastritis with the fifth position in hospitalized patients (Rahman et al., 2021) namely dyspepsia, heartburn which consists of gastritis and other diseases with 9,954 cases in men while 15,122 in women which in the first position is gastroenteritis diarrhea with 37,281 cases in men while 34,608 in women.(Kementerian Kesehatan Republik Indonesia, 2019)

Several surveys show that gastritis most often attacks the productive age. Medicine at the University of Indonesia (FKUI) in 2019, around 60 percent of Jakarta's population who are of productive age have been affected by gastritis and at the age of young children, around 27% have gastritis, which is trivial. Various studies have concluded that complaints of pain in gastritis are the most common as a result of functional gastritis, reaching 70-80% of all cases. (Ariyanti, 2019)

From data obtained from the Pangandaran District Health Office for the January-October 2020 period, it was found that the number of teenagers was 213,652, consisting of 105,743 males and 107,909 females. Based on data from the Pangandaran District Health Office, it is known that the Cigugur Public Health Center is the health center that has the highest number of adolescents experiencing gastritis, namely 726 people (15%) with the number of adolescents aged 16-19 years as many as 4798 people compared to Parigi Health Center which is 623 people (13, 7%) with the number of adolescents aged 16-19 years as many as 4,556 people, Pangandaran Health Center namely 530 people (12%) with the number of adolescents aged 16-19 years as many as 4532 people, Cijulang Health Center namely 521 people (11.7%) with the number of teenagers aged 16-19 years as many as 4,445 people.

Risk factors for gastritis are irregular eating patterns, using aspirin or non-steroidal anti-inflammatory drugs, infection with *Helicobacter pylori* bacteria, having a habit of consuming alcoholic beverages, having a smoking habit, and often experiencing stress. Bad eating habits and consuming unhygienic food (Gunawan et al., 2022) is a risk factor for gastritis.(Rizka Ausrianti, 2019)

Irregular eating patterns are caused by the busyness of many teenagers outside the home such as going to school, organizational activities, and playing so that teenagers do not have time to have breakfast and lunch at home so they only buy snacks in the canteen or snack outside the home by eating spicy and spicy food. seasoned such as boiled noodles, spicy

food, or fried foods by adding a lot of sauce to the food and also seen teenagers at rest who only eat snacks and canned drinks containing gas/soda to fill an empty stomach.(Evi, 2016)

In research (Monica, 2019) shows that of the 30 respondents who experienced gastritis, the proportion of gastritis incidence was higher in respondents who had poor eating habits (100%) than respondents with good eating habits (22%). In Maulidiyah's research (2016), from 90 respondents, it was found that 54 respondents (77.1%) had poor eating habits and 16 respondents (22.9%) had good eating habits. Regulating a diet that is not good and irregular will cause recurrence in gastritis sufferers. Therefore, setting a good and regular diet is one of the management of gastritis and is also a preventive measure in preventing gastritis recurrence.

Cases with gastritis are one of the types of cases that are generally suffered by teenagers, especially this disease is increasing among students. caused by various factors such as irregular eating patterns, wrong lifestyle, and increased activity (lecture assignments) so that students do not have time to regulate their eating patterns and are lazy to eat.(Yudhaputra , 2020)

The impact of gastritis can interfere with the patient's daily activities due to the emergence of various complaints such as pain in the pit of the stomach, burning sensation, nausea, vomiting, weakness, no appetite, and other complaints. If this disease is not treated optimally and is left chronic, gastritis will develop into peptic ulcers which eventually complicates bleeding, gastric perforation, peritonitis, and even death. To prevent gastritis, patients should choose a balanced diet according to their needs and a regular eating schedule, choose soft, easy-to-digest foods, eat small portions but often, avoid stress and excessive emotional stress and avoid foods that increase stomach acid.(Wahyuni et al., 2017).

Based on a preliminary study conducted by researchers on 10 teenagers in the Cigugur Public Health Center, Pangandaran Regency with the interview method, it was found that 8 teenagers (80%) had a history of gastritis and 2 teenagers (20%) did not have a history of gastritis. Where the characteristics of the diet of adolescents who have a history of gastritis are sometimes eating breakfast, having a frequency of eating less than 3 times a day, and always consuming spicy and sour foods. In addition, based on interviews with several teenagers, in addition to consuming food provided at home, some of them also often buy food and snacks outside the home such as spicy and seasoned foods such as boiled noodles, seblak, claw firecrackers, spicy cigor geprek chicken, or fried foods with added sauce. a lot in the food. If this is not followed up properly it will have a negative impact on the growth process and for students, it can interfere with the teaching and learning process.

## **Objective**

Knowing the relationship between diet and the incidence of gastritis in adolescents in the Work Area of the Cigugur Public Health Center, Pangandaran Regency in 2021.

## Method

This type of research is quantitative analytic research using a cross-sectional approach, ie data collection is collected at the same time to shorten the time. (Notoatmodjo,2012)

In this study, data collection of independent variables and dependent variables was carried out simultaneously based on the status of the situation at that time (data collection), namely the relationship between diet and the incidence of gastritis in adolescents. The measurement results are presented in the form of a frequency distribution table and a cross table (Kurniawan et al., 2020).

## Results Assessment

### 1. Univariate Analysis

- a. An overview of the eating patterns of adolescents in the work area of the Cigugur Public Health Center, Pangandaran Regency in 2021.

Based on the results of the study, it was known that the eating patterns of adolescents in the Work Area of the Cigugur Health Center, Pangandaran Regency in 2021, the highest frequency was in the bad category as many as 60 people (61.2%) and the lowest frequency was in the good category as many as 38 people (38.8).

- b. Gastritis Incidence in Adolescents in the Work Area of the Cigugur Public Health Center, Pangandaran Regency in 2021.

Based on the results of the study, it was found that the incidence of gastritis in adolescents in the Work Area of the Cigugur Health Center, Pangandaran Regency in 2021, the highest frequency was in the category of occurring as many as 56 people (57.1%) and the lowest frequency in the non-occurring category was 48 people (42.9).

### 2. Bivariate Analysis

Based on the results of the study showed that of 38 teenagers who had a good diet, almost entirely as many as 32 people (84.2%) did not have gastritis and a small part of the respondents, namely 6 people (15.8%) had gastritis, and from 60 people there was no gastritis. almost entirely of adolescents who have poor eating patterns, as many as 50 people (83.3%) have gastritis and a small part of the respondents, namely 10 people (16.7%) do not have gastritis.

From the results of the data analysis, the value of chi-square ( $\chi^2$ ) is 43,341 and the value of value is 0.000. Based on the results of the data analysis above, it can be concluded that there is a significant relationship between diet and the incidence of gastritis in adolescents in the Work Area of the Cigugur Health Center, Pangandaran Regency in 2021 because the value of  $>$  value ( $0.05 > 0.000$ ) and chi-square value ( $\chi^2$ ) count  $>$  chi-square ( $\chi^2$ ) table ( $43.341 > 3.841$ ), i.e. the better the diet, the less gastritis occurs in adolescents and vice versa, the worse the diet, the more gastritis occurs in adolescents.

## Discussion

1. Overview of Eating Patterns in Adolescents in the Work Area of the Cigugur Public Health Center, Pangandaran Regency in 2021

The results showed that the eating patterns of adolescents in the Work Area of the Cigugur Health Center, Pangandaran Regency in 2021 in 2020, were mostly in the bad

category as many as 60 people (61.2%). Based on the results of the questionnaire analysis in the type of food, most of the respondents reported eating spicy food as much as 59%, often in statements eating acidic foods as much as 59%, and often in statements eating fried food as much as 60%, and often in statements eating foods using flavoring agent as much as 58%. For the frequency of eating, most often on statements delaying meal times as much as 61%, often on statements eating fruit containing acids as much as 59%. For eating schedules, some respondents never eat on time even though there are many tasks as much as 54%, often in statements of late eating, stomach ache, bloating, and nausea as much as 58%. For food portions, some respondents often stated that they only ate a little when they were tired as much as 56%, often stated that they did not have an appetite when they had a lot of work, and as many as 56%, never ate snacks regularly as much as 70%, often stated that they only eat when they are hungry. as much as 52%, and often in the statement of not limiting eating seasonal fruit as much as 54%.

This can be caused because respondents are less concerned about their own health (Rahman, Supriadi, et al., 2022) or do not understand what the consequences are if you don't pay attention to the food you eat as well as the busyness factor. Types of food with inappropriate categories, namely foods that can increase stomach acid, while the appropriate categories consumed by respondents so that gastritis does not occur are types of foods that cannot increase stomach acid. The type of food is one of the factors that cause gastritis. (Inda Sapitri et al., 2018) said that consuming spicy food in excess can stimulate the digestive system, especially the stomach and intestines to contract. This opinion is also supported by (Sartika et al., 2020) about the types of foods that can cause gastritis, namely spicy foods, and foods that contain gas and acid.

In addition, respondents do not pay attention to the food they consume, the busy factor, consuming spicy food, foods with high acidity, foods that contain lots of fat/fried foods, and foods containing caffeine such as coffee which can increase the production of stomach acid and ultimately the strength of the stomach wall. decrease. Not infrequently conditions like this cause injury to the stomach wall and cause gastritis (Wahyuni et al., 2017). Respondents should avoid foods that stimulate the stomach wall that produce excessive acid, including spicy foods, acidic foods that contain gas or those that contain lots of fat or fried foods that can lead to gastritis.

The results of this study are in line with research conducted by Research (Kuniyo, n.d. 2015) Regarding the daily diet of gastritis sufferers, it was found that from 40 respondents, 26 respondents (65%) had a poor diet and 14 people (35%) had a good diet.

According to (Rahman Muharam et al., 2019) states that diet is a way or effort in regulating the amount or type of food with a specific purpose. Thus, a healthy diet can be interpreted as a way or effort to carry out healthy eating activities. While what is meant by a healthy diet in this study is a way or effort in regulating the amount and type of food ingredients with a specific purpose such as maintaining health, nutritional status, preventing or helping cure disease. The daily diet is a person's eating patterns that are related to eating habits every day.

Based on the research above, it can be concluded that the daily eating pattern is seen in the habit of eating schedules that are often irregular, such as often being late to eat or delaying meal times and sometimes not having breakfast or not eating lunch or not eating dinner so that it makes the stomach feel empty in a short time. long. Irregular eating schedule will certainly be able to attack the stomach which can cause ulcer disease or gastritis.

## 2. Overview of Gastritis Incidence in Adolescents in the Work Area of the Cigugur Public Health Center, Pangandaran Regency in 2021

The results showed that the incidence of gastritis in adolescents in the Work Area of the Cigugur Health Center, Pangandaran Regency in 2021, mostly categorized as gastritis as many as 56 people (57.1%). This is due to teenagers who are often late to eat and like to eat sour and spicy foods, besides that, teenagers have irregular eating patterns so they are prone to gastritis.

The results of this study are in accordance with (Frekuensi et al., 2018), Gastritis is an inflammation or bleeding of the gastric mucosa that can be acute, chronic, diffuse, or local. Gastritis is an inflammation of the gastric mucosa most often caused by diet irregularities (RAHMAN, 2020) , for example eating too much and too fast or eating food that is too seasoned or infected (Rahman, Nurlatifah, et al., 2022) by other causes such as alcohol, aspirin, bile reflux or radiation therapy.

Gastritis attacks from young adulthood to old age. At that age, all respondents who are still students are often uncontrolled in their food intake, caused among others because of busyness, and there is already an interest in the opposite sex so that at that age they try their best to slim down by eating less. What needs to be understood is that at this age it is very necessary to fulfill all nutrients (Wulansari, 2019)

This research conducted by (Bagas, 2016) on the description of the incidence of gastritis in adolescents at the Al-Hikmah Islamic Boarding School Trayon Karanggede Boyolali showed that most of the gastritis occurred in students aged 15-19 years with a frequency of 39 people (65%).

Based on the above research, it can be concluded that gastritis in adolescents is caused by often uncontrolled food intake, caused among others busyness, busy activities so that they are late to eat, and high stress which results in excess gastric acid production.

## 3. Analisa Bivariat

Based on the results of the study of the relationship between diet and the incidence of gastritis in adolescents in the Work Area of the Cigugur Health Center, Pangandaran Regency in 2021, it showed that of 38 adolescents who had a good diet, almost entirely, as many as 32 people (84.2%) did not have gastritis and a small proportion of them did not have gastritis. respondents, namely 6 people (15.8%) had gastritis, and from 60 teenagers who had bad eating patterns almost all of them were 50 people (83.3%) had gastritis and a small part of the respondents were 10 people (16.7%). % no gastritis.

From the results of data analysis, the value of chi square ( $\chi^2$ ) is 43,341 and the value of value is 0.000. Based on the results of the data analysis above, it can be concluded that there is a significant relationship between diet and the incidence of gastritis in adolescents in the Work Area of the Cigugur Health Center, Pangandaran Regency in 2021 because the value of  $p$  value ( $0.05 > 0.000$ ) and chi square value ( $\chi^2$ ) count  $>$  chi square ( $\chi^2$ ) table ( $43.341 > 3.841$ ), i.e. the better the diet, the less gastritis occurs in adolescents and conversely the worse the diet, the more gastritis occurs in adolescents.

Based on the analysis of the questionnaire items (Ali Rahman, 2020) eating patterns in adolescents based on the type of food are mostly in the bad category as many as 61 people (62.2%), based on the frequency of eating most are in the bad category as many as 60 people (61.2%), based on the eating schedule most are in the bad category as many as 59 people (60.2%), and based on eating patterns most of them were categorized as unfavorable as many as 58 people (59.2%).

The results of this study are in line with research conducted by (Saparina et al., 2020) Regarding the factors related to the incidence of gastritis in the Work Area of the Bahu Health Center, Manado City, the results showed that the factors that had a relationship with the incidence of gastritis were diet, smoking, alcohol and coffee while the factors that did not have a relationship with the incidence of gastritis were the use of NSAIDs.

This is also in line with (Hawati, 2020) which states that the risk factors for gastritis are irregular eating patterns, using aspirin or non-steroidal anti-inflammatory drugs, infection with *Helicobacter pylori* bacteria, having a habit of consuming alcoholic beverages, having a smoking habit, and often experiencing stress. Poor eating habits and consuming unhygienic food are risk factors for gastritis. Irregular eating patterns are caused by the busyness of many teenagers outside the home such as going to school, organizational activities, and playing so that teenagers do not have time to have breakfast and lunch at home so they only buy snacks in the canteen or snack outside the home by eating spicy and spicy food. seasoned such as boiled noodles, fried rice, soto, meatballs, pentol, satay, or fried foods by adding a lot of sauce to the food and also seen teenagers at rest who only eat snacks and canned drinks containing gas/soda to fill an empty stomach.

Certain foods can cause gastritis, such as unripe fruit, curries, spicy, sour foods, and foods that contain lots of cream or butter. This does not mean that these foods cannot be digested, but because the stomach takes longer to digest the food and is slow to pass it on to the rest of the intestine. As a result, gastric contents and gastric acid stay in the stomach for a long time before being passed into the duodenum and the acid released causes heartburn and can be irritating. (Wahyuni, 2016).

Based on the above analysis, it can be assumed that the diet with the incidence of gastritis in adolescents. Poor eating habits and consuming unhygienic food are risk factors for gastritis. Irregular eating patterns are caused by the busyness of many teenagers outside the home such as going to school, organizational activities, playing so that teenagers do not have time to have breakfast and lunch at home so they only buy snacks in the canteen or eat snacks outside the home by eating spicy food.

## Conclusion

There is a relationship between diet and the incidence of gastritis in adolescents.

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