

ORIGINAL ARTICLE

The Relationship Between Diet Pattern and Gastritis Prevalence in Nursing Semester II Study Program Students

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ABSTRACT

Introduction: Poor dietary patterns can cause gastric irritation. Patients with gastritis should take care of their dietary habits because this disease affects the digestive system. The aim of this study is to investigate the association between dietary patterns and the prevalence of gastritis in the second semester students of the nursing program in the Health Polytechnic, Gorontalo. **Methods:** This study was conducted in the Health Polytechnic, Gorontalo on 23 March 2017 until 27 March 2017. This is an analytic survey with cross-sectional study design. The independent variable was the quality of dietary patterns, and the dependent variable was the prevalence of gastritis. The subjects were recruited using systematic random sampling, and a total of 118 college students from the second semester of nursing program in Health Polytechnic, Gorontalo. **Results:** Overall, the second-semester students of the nursing program of the Health Polytechnic in Gorontalo had good dietary patterns (61.0%), and the majority did not have gastritis (71.2%). Statistical analysis using chi-square showed the value of χ^2 10.421 and p value of 0.001. **Conclusion:** There was an association between the dietary patterns and the prevalence of gastritis in the second-semester nursing program college students of the Health Polytechnic, Gorontalo.

Keywords: Dietary patterns, Gastritis, Nursing

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INTRODUCTION

Gastritis or dyspepsia, or more commonly known as '*maag*' by Indonesian people, is defined as a group of symptoms characterized by pain in the epigastric area, nausea, vomiting, bloating, and a sensation of discomfort (1). There is two commonly recognized cause of gastritis, exogenous agents causing irritations and infections such as alcohol, drugs, bacterial or viral infections, corrosive agents, poisons, and endogenous agents causing excessive production of gastric acids, such as frequently eating acidic or spicy food, irregular eating habits, and mental stress such as frustration (2).

The development of gastritis is commonly preceded by irregular eating habits, which heighten gastric sensitivity to the increased production of gastric acid. Dietary patterns provide several information, including

the frequency of eating, the portion of food, and the types and models of food consumed daily by a person. Good and regular dietary habit is one of the keys in the management of gastritis and is important to prevent the recurrence of gastritis. The management of gastritis required the patients to take care of their dietary habits to improve the conditions of the digestive system. Dietary or food consumption pattern is also defined as the type and amount of food consumed by an individual or a group of people at a time (3).

The Indonesian health profile in 2011 reported that gastritis was one of the 10 commonest diseases in inpatient wards of Indonesian hospitals with the total number of cases of 30,154 cases (4.9%) (Ministry of Health, 2012). The prevalence of gastritis was quite high in several regions in Indonesia, with a total prevalence of 274,396 cases from 238,452,952 total number of people (4). Data of the Health Agency of Gorontalo City reported that the total number of gastritis cases in 2015 was 8,584 cases, which meant gastritis was the third commonest disease encountered in Gorontalo Community Health Center (5).

Based on the interview from 5 second semester students of the nursing program of the Health Polytechnic in Gorontalo with symptoms of gastritis, they reported that they frequently skipped on meals because of college assignments and to meet the deadlines. They also frequently ate spicy and sour food. They were not able to organize their time, resulting in frequently skipping meals. Based on those, the writers were interested to investigate "The association of dietary patterns and the prevalence of gastritis in second semester students of the nursing program of the Health Polytechnic, Gorontalo".

MATERIALS AND METHODS

This research was conducted at the Gorontalo Health Polytechnic from 23 March 2017 to 27 March 2017. This research is an analytical survey using a cross-sectional design. Samples were taken using stratified random sampling with a total of 118 students. The instrument used was a questionnaire. Univariate and bivariate analyzes were performed using the chi-square test (6).

RESULTS

Characteristics of Subjects

Based on the Table I. most subjects were 18 years old (59 people, 50.0%) and the youngest were 17 years old (8 people, 6.8%).

Table I : Distribution based on the age of the second semester nursing program students

Age	Frequency	
	n	%
17 years old	8	6,8
18 years old	59	50,0
19 years old	39	33,1
>20 years old	12	10,2
Total	118	100

Source : Primary Data, 2017

Based on the Table II. most subjects were female (75 people, 63.6%), while the number of male subjects was 43 people (36.4%).

Table II : Distribution based on the gender of the second semester nursing program students

Gender	Frequency	
	n	%
Male	43	36,4
Female	75	63,6
Total	118	100

Source: Primary Data, 2017

Univariate Analysis

Based on the Table III. most subjects had good dietary patterns 72 subjects (61.0%) and 46 subjects (39.0%) had poor dietary patterns.

The study results showed that there were 72 subjects with good dietary patterns and 46 subjects with poor dietary patterns. The writer assumed that most students (61.6%) had good dietary patterns. Based on the tabulation of data, most subjects (65.3%) answered 'always' and 'usually' had 3 meals a day, the rest answered 'sometimes' or 'occasionally'. The students were often busy in finishing their tasks, which made them had their meals in a hurry. This was corroborated by their answers that most of them (66.1%) 'always', 'often', and 'sometimes' were eating in a hurry.

Table III : Dietary patterns of the second semester nursing program students

Dietary Pattern	Frequency	
	n	%
Good	72	61.0
Poor	46	39.0
Total	118	100

Source : Primary Data, 2017

Based on the Table IV. there were 34 subjects (28.8%) with gastritis and 84 subjects (71.2%) did not have gastritis.

Table IV : The prevalence of gastritis in the second semester nursing program students

Gastritis	Frequency	
	n	%
Yes	34	28.8
No	84	71.2
Total	118	100

Source : Primary Data, 2017

Bivariate Analysis

Based on the Table V. there were 34 out of 118 subjects (28.8%) with gastritis. Of those groups, 13 subjects (11.0%) had good dietary patterns, while 21 subjects (17.8%) had poor dietary patterns. There were 84 subjects (71.2%) who did not have gastritis, 59 subjects (50.0%) had good dietary patterns, while 25 subjects (21.2%) had poor dietary patterns.

Results from the chi-square test showed that the χ^2 value was 10.421 with p value 0.001. Based on the hypothesis statistics the χ^2 value $> \chi^2$ table (3.841) and $p < \alpha$ (0.05),

Table V : The association between dietary patterns and the prevalence of gastritis in the second semester nursing program students

Dietary Pattern	Gastritis						χ2 value p value
	Yes		No		Yes		
	n	%	n	%	N	%	
Good	13	11.0	59	50,0	72	61.0	10.421 0.0001
Poor	21	17.8	25	21,2	46	39.0	
Total	34	28.8	84	71.2	118	100	

which rejected H0 and accepted Ha. Therefore, there was an association between dietary patterns and the prevalence of gastritis in the second semester students of the nursing program of the Health Polytechnic, Gorontalo.

DISCUSSION

Dietary Patterns

Every person had a different dietary pattern, and a lot of people were not aware of healthy dietary patterns. Some of them were aware of it but did not practice it in their daily lives. This can be affected by reduced appetite and having a lot of activities that lead to poor dietary patterns (7).

The Prevalence of *Gastritis*

There were a lot of factors that were associated with gastritis, including stress, dietary patterns, consumption of coffee or tea, and smoking. Dietary pattern was the main factor associated with *gastritis*. Irregular dietary habits could cause *gastritis* (8).

The Association between Dietary Patterns and the Prevalence of *Gastritis*

This result could be caused by the negligence of the students to follow good dietary habits. There were a lot of reasons, such as the academic assignments which kept the students busy resulting in irregular meals. In addition, most of them lived alone in the dormitories and they only ate foods they liked such as fast-food or instant noodles, which if consumed excessively could cause *gastritis*.

People with irregular eating habits had higher risks of *gastritis*. When the stomach was left empty for a long period of time, the gastric acid will digest the gastric mucosa which will cause pain. The irregular dietary habit made the stomach difficult to adapt. If this continued for a long period of time, the increased production of gastric acid will irritate the gastric mucosa and can induce peptic ulcers. This can cause pain and nausea. The acid can reflux to the esophagus, causing heartburn (8,9).

CONCLUSION

Most of the second semester students of the nursing program of the Health Polytechnic, Gorontalo had a good dietary pattern. Most of the second semester students of the nursing program of the Health Polytechnic, Gorontalo had no *gastritis*. There was an association between the dietary patterns and the prevalence of *gastritis* in the second semester students of the nursing program of the Health Polytechnic, Gorontalo.

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