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Factors Associated with Gastritis Incidence Among Adolescents Attending the Clinic

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Abstract

Background: Inflammation of the inner lining of the stomach, known as gastritis, is caused by lesions in the gastric mucosa and inflammation of the gastric epithelium. Recurrence of gastritis due to irregular eating habits, inadequate nutrition or food quality, consuming too much or too little food, or consuming foods that are difficult for the body to digest will worsen the condition. Prolonged stress can also lead to the development of gastritis because it reduces blood flow to the gastric mucosa, increases its permeability and affects psychological well-being.
Purpose: The aim of this study was to determine the factors associated with the occurrence of gastritis in adolescent members at the Teratai Clinic, Sat Brimobda Sultra.
Methods: This research design uses a quantitative Cross Sectional approach. The number of samples is 50 people who suffer. Data analysis method with chi square test.
Results: This study shows a correlation between stress (p value = 0.007) and diet (p = 0.000)
Conclusion: at the Teratai clinic Sat Brimobda Sultra, the incidence of gastritis in adolescents is correlated with both food and stress. It is anticipated that suggestions will include more information about stress and nutrition for nurses.

Background

Gastritis is an inflammation of the lining of the stomach that arises from the histological picture of the gastric mucosa. This is related to inflammation of the epithelial layer of the stomach and wounds that occur in the gastric mucosa (Peng et al., 2024). According to data from the World Health Organization (WHO), the global incidence of gastritis, which includes 35% in Canada, 31% in China, 29.55% in France, 22% in the UK, and 14.5% in Japan (World Health Organization, 2020). Around 583,635 people (32.5%) in Southeast Asia suffer from gastritis each year (Bahnur, 2023). WHO estimates that 40.8% of Indonesians suffer from ulcers (World Health Organization, 2020). The highest figure, namely 91.6%, shows the prevalence of ulcers in Indonesia (Kementerian Kesehatan RI, 2021). The prevalence of gastritis is quite high in several regions of Indonesia, with 274,396 cases compared to 238,452,952 other cases (Raben et al., 2023).

Information from the province of Southeast Sulawesi shows that 32,243 cases (21.4%) of gastritis occurred in 2019, 37,140 cases (22.8%) occurred in 2020, and 41,250 cases occurred in 2021 (Dinas Kesehatan Provinsi Sulawesi Tenggara, 2023). Data from the Teratai Clinic of the Southeast Sulawesi Brimobda Unit on the top 10 diseases in 2023 shows that gastritis is in second place. According to the data, there were 227 cases of gastritis in 2021, 209 cases in 2022, and 371 cases in 2023 (Klinik Teratai Sat Brimobda Sultra, 2024).

Diet is one of the causes of gastritis. Someone who consumes too many foods that increase stomach acid, such as spicy and sour foods, can experience gastritis (Afsari et al., 2023). Prolonged stress is also a trigger for gastritis (Megha et al., 2024). This is because the gastric mucosa receives less blood flow, which increases the permeability of the stomach wall. This can have a negative impact on a person's psychological state and cause repeated episodes (Azer et al., 2024).

Based on the research that has been done, it was found that there is a substantial correlation between stress and food and gastritis recurrence. Another study found that almost half of patients with gastritis have a poor diet (49 people, or 91%), that all patients with gastritis eat something bad (54 people, or 100%), and that almost half of patients with gastritis experience stress. events in the moderate category (23 patients, or 42.6%) (Yunanda et al., 2023). Determination of variables related to the prevalence of gastritis in adolescents at the Integrated Clinic of Sat Brimobda Sultra is the aim of this study.

Method

This study uses a cross-sectional and quantitative research methodology. In July 2024, 100 couples who were members of the integrated clinic of the Brimobda Ultra General Polyclinic became the study population. Purposive sampling was used in the sampling procedure for this study, which included a sample of up to 50 respondents. Utilizing the Depression Anxiety and Stress Scale (DASS-42) as a study tool (Purnamasari et al., 2023). Using the Chi-square test for data analysis.

Results

In Table 1, the age distribution of 50 respondents shows that 43 (86.0%) respondents are in the 18-25 age group, while 7 (14.0%) are in the 26-35 age group. In terms of gender, 47 (94.0%) respondents are male, while 3 (6.0%) are the fewest..

Table 1. Typical distribution of responses according to gastritis prevalence

No	Variable	f	%
1.	Age (Year)		
	• 18-25	43	86.6
	• 26-35	7	14.0
2.	Gender		
	• Male	47	94.0
	• Female	3	6.0
3.	Education		
	• Hight School	34	68.0
	• Academy	16	32.0
4.	Religion		
	• Islam	36	72.0
	• Cristian	9	18.0
	• Hindu	5	10.0

Table 1 also shows that out of 50 respondents, the highest education level of respondents is high school education with 34 people (68.0%), and ACADEMY/S1 with 16

people (32.0%). Based on the distribution of respondents' religions, there are 36 Muslims (72.0%), 9 Christians (18.0%), and 5 Hindus (10.0%).

Table 2. Distribution of Gastritis Incidence in Relation to Diet and Stress

No	Variable	f	%
1.	Incidence of Gastritis		
	• Suffering	30	60.0
	• Not Suffering	20	40.0
2.	Eating PatternMale		
	• Good	23	46.0
	• Not Good	27	54.0
3.	Stress		
	• Normal	6	12.0
	• Mild-Moderate	22	44.0
	• Severe	22	444.0

Table 2 shows that out of 50 respondents based on gastritis incidents with the category of suffering from gastritis amounted to 30 (60.0%), and the category of not suffering from gastritis amounted to 20 (40.0%). Table 2 also shows that 1 out of 50 respondents, 23 (46.0%) are included in the "good" diet group, and the category of not good amounted to 27 (54.0%). Likewise, stress shows that out of 50 respondents with the normal category amounted to 6 (12.0%), the mild-moderate category amounted to 22 (44.0%), and the severe category amounted to 22 (44.0%).

Table 3. Relationship Between Diet and Gastritis Incidence

Diet	**Gastritis Occurrence**				**Total**		**ρ value**
	Suffering		**No Suffering**				
	n	**%**	**n**	**%**	**N**	**%**	
Good	3	13	20	87	23	100	0.001
Not Good	27	100	0	0	27	100	
Total	30	60	20	40	50	100	

Table 3 reveals that of the 50 respondents who reported suffering from gastritis, 3 (13.0%) were in the good diet category and 27 (100%) were in the bad diet category. Conversely, 20 respondents (87.0%) in the healthy diet category and none in the bad diet category (100%), were reported not to suffer from gastritis. Based on the findings of the analysis showing a value of 0.000 <0.05, there is a relationship between diet and the occurrence of gastritis in adolescents at the Teratai Clinic, Sat Brimobda Sultra.

Table 4. Relationship between Gastritis Incidence and Stress

Stress	**Gastritis Occurrence**				**Total**		**ρ value**
	Suffering		**No Suffering Menderita**				
	n	**%**	**n**	**%**	**N**	**%**	
Normal	1	16.7	5	83.3	6	100	0.007
Light-Moderate	18	81.8	4	18.2	22	100	
Critical	11	50.0	11	50.0	22	100	

Total	30	60.0	20	40.0	50	100

Table 4 shows that out of 50 respondents who stated that they suffered from gastritis, there were 1 person in the normal category (16.7%), 18 people in the mild-moderate stress category (81.8%), and 11 people in the severe stress category (50.0%). Meanwhile, respondents who stated that they did not suffer from gastritis consisted of 5 people in the normal category (83.3%), 4 people in the mild-moderate stress category (18.2%), and 11 people in the severe stress category (50.0%). Based on the findings of the chi square test study which produced a value of $\rho = 0.007 < \alpha = 0.05$, there is a relationship between stress and the occurrence of gastritis in adolescents at the Integrated Clinic of Sat Brimobda Sultra

Discussion

One of the common health problems in the community, especially among adolescents, is gastritis. According to this study, there is a substantial correlation between nutrition and the prevalence of gastritis in adolescents attending the Teratai Clinic of the Southeast Sulawesi Brimobda Unit. According to the study, diet plays a major role in the occurrence of gastritis, with consuming foods that are high in fat, spices, and acids increasing the risk of irritation of the stomach lining. This related theory focuses on the role of food composition in influencing the balance of gut microbiota and gastric acid production. In addition, irregular eating habits and psychological stress resulting from poor diet can worsen stomach conditions. Thus, understanding the relationship between diet and the incidence of gastritis is important in efforts to prevent and manage this disease, especially in vulnerable populations (Azer et al., 2024).

Another aspect of this data is that there was no evidence of gastritis in respondents who followed a healthy diet. This is in accordance with the findings of (Widodo et al., 2021), who showed that eating a healthy and regular diet can significantly reduce the risk of developing gastritis. They found that consuming foods high in fiber, low in fat, and avoiding foods that irritate the stomach can help prevent the worsening of gastritis. However, it should be noted that gastritis is not only caused by diet. Other factors such as stress, alcohol consumption, and Helicobacter pylori infection also play an important role (Purnamasari et al., 2022).

The occurrence of gastritis in adolescents at the Teratai Clinic, Sat Brimobda Sultra was significantly correlated with stress levels, according to this study. These results are consistent with a recent study (Syam et al., 2020) which showed a significant correlation between high stress levels and increased incidence of gastritis, especially in adolescents. According to their study, adolescents who experienced high levels of stress were 2.5 times more likely to develop gastritis than those who did not. Another interesting aspect of this data is the high percentage of severe stress in cases. This is consistent with the finding that patients with consistently high levels of stress over a 6-month period were 3 times more likely to experience progression from acute to chronic gastritis (Purnamasari et al., 2020).

Conclusion

It can be concluded from this study that stress and diet have an impact on the prevalence of gastritis in adolescents at the Integrated Clinic of Sat Brimobda Sultra. It is anticipated that the findings of this study will contribute to the field of nursing science and provide useful information for the general public, especially in the Kendari City area.

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