



THE CORELATION BETWEEN STRESS AND COFFEE CONSUMPTION ON GASTRITIS IN THE HEALTH CENTER WORKING AREA PONDOK BENDA, BANTEN

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Article Info

Article History:

Submit: April 02, 2026

Accepted: April 18, 2026

Publish: May 08, 2026

Key words:

Stress, Coffee Consumption Pattern, Gastritis Incidence

Abstract

Indonesian health profile data in 2022 revealed that there were 30,154 cases of gastritis and included in the top ten diseases among sick people in Indonesian hospitals. Predisposing factors in the occurrence of gastritis are respondent characteristics, stress, and coffee consumption patterns. This study is a quantitative study that uses primary data (questionnaires) and uses cross-sectional research methods. The aim of this study is knowing the relationship between the stress and coffee consumption to gastritis. The sampling technique in this study used Purposive Sampling with a total sample size of 172 early adults in the Pondok Benda Health Center working area. The results of this study found that there was a relationship between stress and the incidence of gastritis (p -value = 0.037, α : 0.05) and there was a relationship between coffee consumption and the incidence of gastritis (p -value = 0.024, α : 0.05). Conclusion in this study is there was a relationship between stress and coffee consumption patterns to the incidence of gastritis.

BACKGROUND

Gastritis is a disease that most often appears in the digestive tract and is still very much found in the community (Putri et al, 2020). Gastritis can be acute which comes suddenly in a few hours or days and can also be chronic for months or years (Diyono, 2019). Gastritis is an inflammation of the gastric mucosa and submucosa. Clinically gastritis can cause symptoms such as heartburn, burning, heat, nausea which can be accompanied by vomiting, loss of appetite and headache (Selviana, 2020).

Indonesia's 2022 health profile data also revealed that there were 30,154 cases of gastritis and was included in the top ten diseases among the sick in Indonesian hospitals. One of the triggers for gastritis is consuming coffee. The International Coffee Organization (ICO) said that coffee consumption in Indonesia reached 5 million 60 kg bags in 2020 to 2021. The volume increased by 4.04% compared to the previous season, which was 4.81 million 60 kg bags. Indonesia's coffee consumption in 2020 to 2021 is also the highest in the last decade.

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Jurnal Ilmu Keperawatan Medikal Bedah, Vol 9 No 1, May 2026

DOI: <http://dx.doi.org/10.32584/jikmb.v5i1.3168>

ISSN 2338-2058 | e-ISSN 2621-2986



Coffee is a beverage that consists of various types of ingredients and chemical compounds, including fats, carbohydrates, amino acids, plant acids called phenols, vitamins and minerals. Coffee is known to stimulate the stomach to produce gastric acid, creating a more acidic environment and irritating the gastric mucosa. The polyphenol content in coffee, especially Chlorogenic Acid (CGA), which functions as an antioxidant that can reduce free radical toxins in the body. Caffeine in coffee can accelerate the production of stomach acid. This causes excess gas production in the stomach, resulting in frequent complaints of flatulence. People who often drink coffee have a 3.57 times greater risk of developing gastritis compared to those who do not often drink coffee (Ilham, Haniarti and Usman, 2019).

Another factor that can cause gastritis is stress. Stress itself can be defined as the level where the self feels unable to cope with everything or things as a result of un-controlled pressure (Mental Health Foundation, 2021). Meanwhile, according to the Ministry of Health of the Republic of Indonesia (Kemenkes RI) stress is a condition when a person experiences very heavy pressure, both emotionally and mentally (Kemenkes, 2018). According to data from the Ministry of Research and Technology (Kemristek), 55% of people in Indonesia experience stress, with a very severe stress level category of 0.8% and mild stress of 34.5% (Direja, 2020).

The results of preliminary studies conducted by researchers on Early Adults in the Pondok Benda Health Center Working Area with the interview method found that 10 out of 15 people experienced stress, 14 out of 15 people consumed coffee, 11 out of 15 people were found to have gastritis, 5 out of 15 people did not experience stress, 1 out of 15 people did not consume coffee, and 4 out of 15 people who did not have gastritis.

METHOD

This research design uses descriptive analytic design with quantitative methods and a *cross-sectional* approach. The research location was carried out in the Pondok Benda Health Center Working Area. The research was conducted in Desember 2023 to Januari 2024. The sample in this study were early adults in the Pondok Benda Health Center working area. Sampling in this study used *Non-Probability Sampling*, with *Purposive Sampling* technique. The sample size was 172 respondents obtained from calculations using the Slovin formula. Quantitative data collection techniques for primary data in this study were carried out by distributing questionnaires using *googleform*. The independent variables in this study are Stress and Coffee Consumption Patterns. The dependent variable is the incidence of gastritis. The power analysis used is univariate analysis using frequency distribution and bivariate analysis using the *Pearson Chi-Square* test with a significance level of 95% ($\alpha < 0.05$).

RESULT AND DISCUSSION

The result of data analysis of research on the was analyzed with SPSS in univariate and bivariate

1. Univariate Analysis

a. Data of stress, Coffee Consumption Pattern and Incidence of Gastritis

Table 1. Frequency of Stress

No.	Stress	Frequency	Percentage
1.	Normal	16	9.3
2.	Mild Stress	17	9.9
3.	Moderate Stress	25	14.5
4.	Severe Stress	48	27.9
5.	Moderate Stress	66	38.4
Total		172	100.0

Source : (Primary Data, 2023)

The frequency distribution of stress characteristics in early adulthood in the Pondok Benda Health Center working area out of 172 respondents, found that almost half had moderately severe stress totaling 66 respondents (38.4%), a small proportion had normal stress totaling 16 respondents (9.3%).

Table 2. Coffee Consumption Pattern

No.	Coffee Consumption Pattern	Frequency	Percentage
1.	Low	33	19.2
2.	Medium	83	48.3
3.	High	56	32.6
Total		172	100.0

Source : (Primary Data, 2023)

The frequency distribution of characteristics of coffee consumption patterns in early adults in the Pondok Benda Health Center working area of 172 respondents, it was found that almost half had moderate coffee consumption patterns totaling 83 respondents (48.3%), a small proportion had low coffee consumption patterns totaling 33 respondents (19.2%).

Table 3. Incidence of Gastritis

No.	Incidence of Gastritis	Frequency	Percentage
1.	Gastritis	111	64.5
2.	No Gastritis	61	35.5
Total		172	100.0

Source : (Primary Data, 2023)

The frequency distribution of the characteristics of the incidence of gastritis in early adulthood in the Pondok Benda Health Center working area of 172 respondents, found that more than half had gastritis, totaling 111 respondents (64.5%), almost half did not have gastritis, totaling 61 respondents (35.5%).

2. Bivariate Analysis

Table 4. Analysis of the Relationship between Stress and the Incidence of Gastritis

No.	Stress	Incidence of Gastritis						P-Value
		Yes		No		Total		
		n	%	n	%	n	%	
1	Normal	6	3.5	10	5.8	16	9.3	0.037
2	Lightweight	9	5.2	8	4.7	17	9.9	
3	Medium	17	9.9	8	4.7	25	14.5	
4	Weight	29	16.9	19	11.0	48	27.9	
5	ModeratelyHeavy	50	29.1	16	9.3	66	38.4	
Total		111	64.5	61	35.5	172	100	

Source: (Primary Data, 2023).

The results of the *chi-square* statistical test with a 95% confidence level obtained a *p-value* of (0.037) < α value (0.05). So it can be concluded that Ho is rejected and Ha is accepted, thus it can be interpreted that there is a significant relationship between Stress and the Incidence of Gastritis in Early Adults in the RegionPondok Benda Health Center.

Table 7. Analysis of the Relationship between Coffee Consumption Patterns and the Incidence of Gastritis

No.	Coffee Consumption Pattern	Incidence of Gastritis						P-Value
		Yes		No		Total		
		n	%	n	%	n	%	
1	Low	15	8.7	18	10.5	33	19.2	0.024
2	Medium	60	34.9	23	13.4	83	48.3	
3	High	36	20.9	20	11.6	56	32.6	
Total		111	64.5	61	35.5	172	100	

Source : (Primary Data, 2023)

The results of the *chi-square* statistical test with a 95% confidence level obtained a *p-value* of (0.024) < α value (0.05). So it can be concluded that H_0 is rejected and H_a is accepted, thus it can be interpreted that there is a significant relationship between Coffee Consumption Patterns and the Incidence of Gastritis in Early Adults in the Pondok Benda Health Center Working Area.

DISCUSSION

Univariate Analysis

Stress

The results of the analysis can be concluded based on observations and data obtained by researchers in early adulthood in the Pondok Benda Health Center working area. So that researchers assume that many experience a state of stress, namely either mild, moderate, severe, or quite severe stress.

Coffee Consumption Pattern

The results of the analysis can be concluded based on observations and data obtained by researchers in early adulthood in the Pondok Benda Health Center working area. So that researchers assume that many consume coffee with a range of low, medium, and high categories.

Incidence of Gastritis

The results of the analysis can be concluded based on observations and data obtained by researchers in early adults in the Pondok Benda Health Center working area, more than half of the respondents experienced gastritis. So that researchers assume that stress and coffee consumption patterns can affect the occurrence of gastritis

Bivariate Analysis

Relationship between Stress and Gastritis

The results of the analysis can be concluded based on observations and data obtained by researchers in early adulthood in the Pondok Benda Health Center working area there are respondents who experience stress with gastritis. So that researchers assume that stress can affect the occurrence of gastritis because the results of the *chi-square* test with a *p-value* = (0.037) < α value (0.05). So it can be concluded that there is a significant relationship between Stress and the Incidence of Gastritis in Early Adults in the Pondok Benda Health Center Working Area.

Relationship between Coffee Consumption Pattern and Gastritis Incidence

The results of the analysis can be concluded based on observations and data obtained by researchers in early adulthood in the Pondok Benda Health Center working area there is a pattern of coffee consumption with the incidence of gastritis. So that researchers assume that coffee consumption patterns can affect the occurrence of gastritis due to the results of the *chi-square* test with a *p-value* = (0.024) < α value (0.05). So it can be concluded that there is a significant relationship between coffee consumption patterns and the incidence of gastritis in early adults in the Pondok Benda Health Center Working Area.

CONCLUSIONS

1. Conclusion

- a. Identified coffee consumption patterns in early adults in the Pondok Benda Health Center working area, it was found that almost half had moderate coffee consumption patterns totaling 83 respondents (48.3%).
- b. Identified the incidence of gastritis in early adults in the Pondok Benda Health Center working area, it was found that more than half had gastritis, totaling 111 respondents (64.5%).
- c. Analyzed the results of research that has been done that the value (*p-value* = 0.037 < 0.05) which means that there is a relationship between stress and the incidence of gastritis in early adults in the Pondok Benda Health Center Working Area.
- d. Analyzed the results of the research that has been done that the value (*p-value* = 0.024 < 0.05) which means that there is a relationship between coffee consumption patterns and the incidence of gastritis in early adults in the Pondok Benda Health Center Working Area

Limitation

This study only focused on analyze the corelation, there is no significant intervention that given to respondent to decrease number of gastritis.

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