



## ***THE EFFECT OF CONSUMING TURMERIC JUICE ON PAIN LEVELS IN GASTRITIS PATIENTS IN LAMBRO BILEU VILLAGE KUTA BARO DISTRICT ACEH BESAR REGENCY***

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### ***Abstract***

*Gastritis can affect all segments of society, not limited to age and gender. However, the incidence of gastritis is more common to occur in the productive age group due to their busy lives, unhealthy lifestyles, and more stress and depression. This study aims to determine the effect of turmeric extract consumption on pain levels among gastritis patients in Lambaro Bileu Village, Kuta Baro, Aceh Besar. The research employed a quantitative method - a quasi-experimental design with a one-group pretest-posttest approach. The population consisted of 29 patients. The sample was 15 patients experiencing gastritis pain, chosen using a purposive sampling technique. The research was conducted from May 29th to June 15th, 2025. The data analysis was univariate and bivariate with the Paired T-Test. The results showed that out of 15 respondents, most of them experienced moderate pain before being given the turmeric water, with 12 respondents (80%). After being given turmeric water, the majority still experienced moderate pain, with 11 respondents (73.3%) reporting this. Based on the statistical test results, the p-value was 0.000, which is less than 0.05. These findings prove that the consumption of turmeric water extract has a significant effect on pain levels in patients with gastritis. It is hoped that respondents can apply complementary therapy methods using turmeric water extract to reduce gastritis pain.*

**Keywords:** *Gastritis, Pain, Turmeric Juice Intake.*

## **1. INTRODUCTION**

Health development in Indonesia is currently facing two main challenges: communicable diseases, which remain major public health problems and have not been adequately addressed, and a growing prevalence of non-communicable diseases (NCDs), which are largely caused by lifestyle factors. One of the most common diseases found among the population is gastritis (Diyono, 2016).

Gastritis is one of the most frequently encountered diseases in internal medicine clinics as well as in daily life. It is an inflammatory process or a pathological condition caused by irritation and infection affecting the gastric mucosa and submucosa. Gastritis can affect all segments of society across all age groups and genders, but it more frequently occurs among people of productive age due to higher levels of activity, unhealthy lifestyles, and stress that is more likely to occur (Miftahussurur, 2021).

According to a 2022 report from the World Health Organization (WHO), a review conducted across several countries revealed the global prevalence rates of gastritis as follows: United Kingdom 22%, China 31%, Japan 14.5%, Canada 35%, and France 29.5%. The



incidence of gastritis in Southeast Asia is approximately 583,635 cases annually, while in Indonesia, the prevalence is 40.8% (WHO, 2022).

Data from the Indonesian Ministry of Health (Kemenkes, 2023) indicate that gastritis is one of the ten most common diseases in Indonesia, with a total case proportion of 60.8%. Meanwhile, in Aceh Province, the prevalence of gastritis is 56.3% (Aceh Provincial Health Office, 2023).

Data obtained from the Aceh Besar District Health Office (2024) show that the total number of gastritis patients was 6,253. The highest cases were found at Kuta Baro Health Center (2,097 patients), followed by Montasik Health Center (1,532) and Lhoknga Health Center (1,013) (Aceh Besar District Health Office, 2024).

Furthermore, data from Kuta Baro Health Center (2024) recorded 647 gastritis patients, with the highest number located in Lambro Bileu Village, totaling 29 patients (Kuta Baro Health Center, 2024).

If not properly treated, gastritis can lead to complications such as gastric ulcers, hematemesis (vomiting blood), anemia, psychological disorders, and a decrease in overall quality of life. One of the main clinical manifestations of gastritis is pain, typically felt in the epigastric region (upper abdomen), which greatly affects the patient's comfort (Manalu, 2021).

Pain management can be carried out pharmacologically, through the use of medications, or non-pharmacologically, one of which involves the use of turmeric (*Curcuma longa*). Turmeric is a type of spice that is widely available and is native to Southeast Asia, known for its medicinal and herbal properties (Fajriyah, 2022).

Turmeric contains active compounds such as curcuminoids and essential oils, which function as natural remedies to coat and protect the gastric lining, reduce gastric acid levels, and alleviate pain in gastritis patients. These active compounds also help control excessive gastric acid production and relieve bloating caused by gas accumulation in the stomach. Turmeric is believed to cure various diseases without side effects because it is derived from natural ingredients (Syafila, 2024).

A study conducted by Safitri (2020) showed that before turmeric juice administration, the average pain score among respondents was 4.85, which decreased to 2.20 after treatment, indicating that turmeric juice effectively reduced pain levels in gastritis patients. Similarly, a study by Hastari (2022) demonstrated that after three days of turmeric application, patients experienced a reduction in epigastric pain, proving the effectiveness of turmeric in relieving gastritis-related pain.

## 2. METHOD

This study employed a quasi-experimental method with a one-group pretest-posttest design (Amelia et al., 2023). The population consisted of 29 gastritis patients in Lambro Bileu Village, Kuta Baro District, Aceh Besar Regency, from January to December 2024. A purposive sampling technique was used to select 15 respondents who met the inclusion criteria. Data were collected using the Numeric Rating Scale (NRS) questionnaire to measure gastritis pain levels. The intervention involved administering 60 ml of turmeric juice twice daily



(morning and evening) for seven consecutive days. The research was conducted from May 29 to June 15, 2025. Data analysis was carried out using the paired t-test to determine the effect of turmeric juice consumption on pain levels among gastritis patients.

### 3. RESULT AND DISCUSSION

Based on the results of the study conducted from May 29 to June 15, 2025, involving 15 gastritis patients experiencing pain, the intervention was carried out by administering 60 ml of turmeric juice twice daily, in the morning and evening, for seven consecutive days. The results of the study are presented as follows:

#### Characteristics of Respondents

**Table 1. Frequency Distribution Based on Respondents' Characteristics in Lambro Bileu Village, Kuta Baro Subdistrict, Aceh Besar Regency (n = 15)**

No	characteristics	f	%
1	<b>Ege</b>		
	Adult (20-59 years)	13	86,7
	Elderly ( $\geq 60$ years)	2	13,3
<b>Total</b>		<b>15</b>	<b>100.0</b>
2	<b>Gender</b>		
	Male	6	40
	Famele	9	60
<b>Total</b>		<b>15</b>	<b>100.0</b>
3	<b>Education</b>		
	primary (Elementary/Junior)	3	20
	Secondary (senior high shool)	9	60
	Higher (Diploma/Bachelor/Masters/Degree)	3	20
<b>Total</b>		<b>15</b>	<b>100.0</b>

Table 1 shows that the majority of respondents were adults (20–59 years old), totaling 13 respondents (86.7%), female respondents accounted for 9 (60%), and most had secondary education, totaling 9 respondents (60%).

#### Univariate Analysis

**Table 2. Frequency Distribution Based on Gastritis Pain Before Administration of Turmeric Juice in Lambro Bileu Village, Kuta Baro Subdistrict, Aceh Besar Regency (n = 15)**

No	Pain level	f	%
1.	Mild	3	20
2.	Moderate	12	80
<b>Total</b>		<b>15</b>	<b>100.0</b>



Table 2 shows that out of 15 respondents, before the administration of turmeric juice, most experienced moderate pain, totaling 12 respondents (80%).

**Table 3. Frequency Distribution Based on Gastritis Pain After Administration of Turmeric Juice in Lambro Bileu Village, Kuta Baro Subdistrict, Aceh Besar Regency (n = 15)**

No	Pain Level	f	%
1.	Mild	11	73,3
2.	Moderate	4	26,7
<b>Total</b>		<b>15</b>	<b>100.0</b>

Table 3 shows that out of 15 respondents, after the administration of turmeric juice, most experienced mild pain, totaling 11 respondents (73.3%).

#### Normality Test Results

**Tabel 4. Data Normality test**

Group	Shapiro-Wilk		
	Statistic	Df	p- value
Pretest Pain	0,881	15	0,490
Posttest Pain	0,887	15	0,060

Table 4 shows that the data are normally distributed, since the p-value of pain before turmeric juice administration (0.490) and after turmeric juice administration (0.060) are both greater than 0.05. Therefore, the statistical test used is the Paired t-test.

#### Bivariate analysis

**Tabel 5. The Effect of Turmeric Juice Administration on Gastritis Pain in Lambro Bileu Village, Kuta Baro Subdistrict, Aceh Besar Regency (n = 15)**

Turmeric	Gastritis Pain			
	Mean Pretest	Mean Posttest	Difference	p-value
<b>Pretest-posttest</b>	4,33	3,00	1,33	0,000

Table 5 shows that before the administration of turmeric juice therapy, the mean pain score of respondents was 4.33, while after the therapy it decreased to 3.00, showing a reduction of 1.33 with a p-value of 0.000. This indicates that there is a significant effect of turmeric juice consumption on reducing pain levels among gastritis patients in Lambro Bileu Village, Kuta Baro Subdistrict, Aceh Besar Regency.



#### 4. CONCLUSION

The results of the study showed that before the administration of turmeric juice therapy, the mean pain score of respondents was 4.33, while after the therapy it decreased to 3.00, showing a reduction of 1.33 with a p-value of 0.000. This means that there is an effect of turmeric juice consumption on the level of pain among gastritis patients in Lambro Bileu Village, Kuta Baro Subdistrict, Aceh Besar Regency.

This finding is consistent with the study conducted by Safitri (2020), which showed that before the administration of turmeric juice, the average pain score of respondents was 4.85, while after treatment it decreased to 2.20, indicating that turmeric juice is effective in reducing pain levels among gastritis patients. Turmeric contains curcumin, which has anti-inflammatory properties that help reduce inflammation in the stomach—the main cause of pain in gastritis patients.

Similar findings were obtained in the study by Hastari (2022), which showed that after the administration of grated turmeric for three days, there was a decrease in epigastric pain, indicating that grated turmeric is effective in reducing pain levels among gastritis patients. Turmeric has gastroprotective effects, meaning it can protect the stomach lining from damage caused by increased stomach acid. Therefore, consuming turmeric helps reduce gastric inflammation that causes pain symptoms.

Turmeric contains active compounds such as curcuminoids and essential oils, which act as agents to heal or coat the injured gastric mucosa and reduce stomach acid levels. These active compounds play an important role in relieving pain in gastritis patients. In addition, turmeric can help control excessive stomach acid production and treat bloating caused by excessive gas in the stomach. Turmeric is believed to be a natural remedy for various diseases without causing side effects, as it is derived from natural ingredients (Syafila, 2024).

According to the researcher's opinion, there is a significant effect of turmeric juice administration on gastritis pain. The study showed that after the administration of turmeric juice, there was a decrease in pain levels. This is due to the presence of curcuminoids and essential oils in turmeric, which act to heal or coat the injured gastric lining and reduce stomach acid levels.

The results also showed that the majority of respondents suffering from gastritis were adults (20–59 years old), totaling 13 respondents (86.7%). A similar study conducted by Yunanda (2023) showed that most gastritis patients were adults, totaling 28 respondents (52%). This finding aligns with the theory stating that adulthood or the productive age is more prone to gastritis symptoms because individuals at this stage are often busy with activities and work, leading to irregular and unhealthy eating patterns and increased stress levels (Miftahussurur, 2021).

The results also revealed that most gastritis patients were female, totaling 9 respondents (60%). A similar study conducted by Maidartati (2021) showed that the majority of gastritis patients were female, totaling 67 respondents (67%). This finding supports the theory that gastric secretion is regulated by neural and hormonal mechanisms. The hormonal regulation occurs through the gastrin hormone, which stimulates the gastric glands to produce highly



acidic gastric juice. Female hormones are more reactive than male hormones, making women more susceptible to gastritis. Additionally, unhealthy dietary patterns are more common among women due to weight concerns, leading many women to adopt unhealthy diets in an effort to lose or maintain weight (Rantung, 2019).

Furthermore, most respondents suffering from gastritis had secondary education levels, totaling 9 respondents (60%). A similar study conducted by Mandala (2022) showed that the majority of gastritis patients had secondary education (senior high school), totaling 148 respondents (44.6%). This finding aligns with the theory stating that educational level can influence a person's knowledge and behavior in preventing or managing gastritis, although it does not directly cause or relieve gastritis pain. Higher education levels are generally associated with better health knowledge, including knowledge about gastritis, its symptoms, causes, and prevention methods. Good knowledge may lead to healthier behaviors, such as maintaining a regular eating pattern, avoiding gastritis triggers, and seeking appropriate medical assistance (Zatnika, 2023).

## 5. DAFTAR PUSTAKA

- [1] Andreyani, A. (2023). Validity of the Visual Analog and Numerical Rating Scales (NRS) for Pain Assessment. *Jambura Journal of Health Science and Research*, 5(2), 730–736.
- [2] Athala, R. (2021). The Gastroprotective Effectiveness of Turmeric Rhizome on the Stomach. *Sandi Husada Scientific Journal of Health*, 10(2), 402–407.
- [3] Aceh Provincial Health Office. (2023). Gastritis Cases. Aceh Health Profile. <https://dinkes.acehprov.go.id>
- [4] Aceh Besar District Health Office. (2024). Gastritis Cases. Aceh Besar District. Annual Report.
- [5] Diyono, S. (2016). *Textbook of Medical-Surgical Nursing: Digestive System*. Jakarta: Kencana.
- [6] Fajriyah, N. (2022). Pain Management in Gastritis Patients Through Administration of Turmeric Juice with Nursing Pain Problems in Nguter Village. *Jurnal Indonesia Sehat*, 1(2), 82–92. <https://jurnal.samodrailmu.org>
- [7] Hastari, L. (2022). Implementation of Grated Turmeric to Reduce Pain in Gastritis Patients at PPSLU Dewanata Cilacap. *Journal of Research Innovation*, 3(2), 4921–4927. <https://ejournal.stmataram.ac.id>
- [8] Ministry of Health of the Republic of Indonesia. (2023). Gastritis Cases in Indonesia. Indonesia Health Profile. <http://www.depkes.co.id>
- [9] Manalu, P. (2021). *Digestive System Nursing*. Yogyakarta: Yayasan Kita Menulis.
- [10] Miftahussurur, M. (2021). *Textbook of Clinical Aspects of Gastritis*. East Java: Airlangga University Press.
- [11] Kuta Baro Community Health Center. (2024). Number of Gastritis Patients. Kuta Baro Subdistrict, Aceh Besar Regency.



- [12] Safitri, E. (2020). The Effect of Turmeric Juice Consumption on Pain in Acute Gastritis Patients Aged 45–54 Years in Kampong Pinang Village, Perhentian Raja Community Health Center Area. *Jurnal Ners*, 4(2), 130–138. <https://doi.org/10.31004/jn.v4i2.1147>
- [13] Syafila, L. (2024). The Effect of Turmeric Decoction Consumption on Abdominal Pain in Gastritis Patients in Families. *Journal of Language and Health*, 5(2), 571–580. <https://doi.org/10.37287/jlh.v5i2.3559>
- [14] World Health Organization (WHO). (2022). Gastritis. <https://www.who.int>
- [15] Yunanda, N. (2023). *The Benefits of Turmeric Rhizome and Betel Leaves*. Malang: Literasi Nusantara Abadi Group.