

Drug Utilization Profile among Outpatients with Dyspepsia at Tuan Rondahaim Regional General Hospital, Pamatang Raya, 2025

Deviana Dorotea Pasaribu¹, Riana Siburian², Crismest Clara Ester Panjaitan³

Program Studi S1 Farmasi, Fakultas Kesehatan, Universitas Efarina, Jl. Sutomo Griya Hapoltakan, Pamatang Raya, Pematangsiantar, Indonesia

Email: aberkatjaya7@gmail.com, riana26@gmail.com, esterrpanjaitan82@gmail.com

Changes in diet and lifestyle are one of the causes of disturbances in the digestive tract. Dyspepsia is a digestive disorder that suffers a lot and is the most common. Dyspepsia can be influenced by several factors, namely increased gastric acid secretion, dietary factors, environmental factors, and psychological factors such as stress. Retrospective qualitative descriptive research with cross sectional and the sampling technique is Purposive Sampling. Samples from the study were obtained from prescription outpatient adult dyspepsia patients aged 18- 65 years at the RSUD Tuan Rondahaim Pamatang Raya. Most sufferers of dyspepsia were female, namely 56 (56%), age range 56–65 the number of patients was 65 (65%). The drug class that is widely used is PPI with the type of drug omeprazole 20 mg in 42 patients (30%), with a frequency of 2 x 1. The most widely used dosage form was omeprazole capsule preparations, namely 42 (30%), the oral route of administration. Accompanying drugs in patients with dyspepsia, namely from the multivitamin group, namely vitamins B complex, the number of uses was 14 (22,58%) and the use of a single dyspepsia drug combination therapy is omeprazole 31 (31%), combination 2 dyspepsia drug that a lot of cytoprotective with PPI and a combination of 3 dyspepsia drug namely PPI, Cytoprotective, Prokinetic.

Keywords: Drug use profile, Dyspepsia.

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Corresponding Author:

Deviana Dorotea Pasaribu
Program Studi S1 Farmasi, Fakultas Kesehatan, Universitas Efarina
Jl. Sutomo Griya Hapoltakan, Pamatang Raya, Pematangsiantar
aberkatjaya7@gmail.com

1. Introduction

Dyspepsia is one of the most commonly identified non-communicable diseases. In 2015, the World Health Organization (WHO) reported that approximately 13–14% of dyspepsia cases worldwide occurred in the general population across countries. Poorly managed dyspepsia cases have contributed to an increase in global morbidity, reaching up to 60% (WHO, 2019).

In Indonesia, it is estimated that approximately 15–40% of the population suffers from dyspepsia. Nearly 30% of patients presenting with dyspeptic complaints or symptoms seek treatment at general medical practices (Aru, 2018). Additionally, about 60% of patients visiting gastroenterology clinics report dyspepsia-related complaints (Djojoningrat, 2019). A study conducted by Simadibrata in 2017 also indicated that dyspepsia ranked sixth among the most common complaints of outpatients in general practice (Simadibrata, 2019).

Dyspepsia may be influenced by several factors, including increased gastric acid secretion and dietary habits. Eating patterns play a significant role in the development of dyspepsia, while environmental factors may also contribute to the onset of the disease. Psychological factors, such as stress, have likewise been shown to influence the occurrence of dyspepsia (Purnamasari, 2019). Changes in dietary habits and lifestyle are among the primary causes of gastrointestinal disorders. Dyspepsia is one of the most prevalent and frequently experienced digestive disorders (Irianto, 2021).

In 2019, the World Health Organization (WHO) reported that the global prevalence of dyspepsia ranged between 13–40% of the total population in each country. WHO also noted that the prevalence of dyspepsia varies globally depending on the definition used and geographical location. Reported prevalence rates include approximately 23–25.8% in the United States, 30.4% in India, 18.4% in Hong Kong, 34.2% in New Zealand, and 38–41% in the United Kingdom. In the Asia-Pacific region, dyspepsia is a commonly reported complaint, with prevalence rates ranging from 10–20% (Purnamasari, 2019).

The recurrence of dyspepsia is associated with various risk factors, including dietary patterns, gender, consumption of spicy foods, occupation, intake of instant foods or acidic foods, smoking, alcohol consumption, high caffeine intake, and psychological factors (Fithriyana, 2018).

A study conducted by Novia Srikandi et al. in 2017 regarding drug utilization profiles at Anutapura General Hospital in Palu among dyspepsia patients revealed that 94.57% of patients received between one and three medications. The most commonly used therapeutic class was anti-ulcer drugs (76.37%), followed by antacids (29.96%). The most frequently used dosage form was capsules, with lansoprazole being the most prescribed medication (37.15%), and the predominant route of administration was oral (98.14%).

2. Methods

Research Design

This study employed a quantitative research design using a retrospective data collection approach. The research utilized prescription data of patients diagnosed with dyspepsia who received outpatient treatment at RSUD Tuan Rondahaim. The dependent variable in this study was drug utilization for dyspepsia among outpatients diagnosed with dyspepsia. The independent variable in this study was outpatients diagnosed with dyspepsia at RSUD Tuan Rondahaim Pamatang Raya in 2025.

Population and Sample

The population of this study consisted of all outpatients diagnosed with dyspepsia who received dyspepsia medications at RSUD Tuan Rondahaim Pamatang Raya during the period January–April 2025, totaling 100 patients. The sample comprised 100 outpatient dyspepsia prescriptions obtained from RSUD Tuan Rondahaim Pamatang Raya during the period January–April 2025.

Inclusion Criteria

The inclusion criteria were as follows:

- a. Outpatients diagnosed with dyspepsia
- b. Patients with complete prescription data
- c. Adult dyspepsia outpatients aged 18–65 years

Exclusion Criteria

The exclusion criteria were:

- a. Damaged or illegible prescriptions
- b. Pediatric patients (< 18 years old)

Sampling Technique

The sampling technique used in this study was non-probability sampling, specifically purposive sampling. This technique is a non-random sampling method based on specific considerations determined by the researcher, in accordance with predefined inclusion and exclusion criteria.

Data Collection

The research process began with the preparation of a research proposal, followed by submitting a research permission request to RSUD Tuan Rondahaim Pamatang Raya. After obtaining approval, the study was conducted by reviewing outpatient prescriptions of dyspepsia patients. Sample prescriptions were selected using the purposive sampling technique and analyzed according to the objectives of the study. The results were presented descriptively in the form of percentages, tables, and diagrams, based on the study objectives concerning outpatient dyspepsia patients at RSUD Tuan Rondahaim Pamatang Raya in 2025.

Data Analysis

The study results included descriptive patient data, drug therapy data, and patient conditions. Descriptive patient data were used to determine the percentage distribution of age and gender among dyspepsia patients. The parameters analyzed included drug class, type of dyspepsia medication, dosage, dosage form, route of administration, and frequency of drug use. The collected data were analyzed using a descriptive-analytic approach, processed using Microsoft Excel, and presented in the form of percentages, mean values, and tables.

3. Results and Discussion

This study aimed to evaluate the pattern of drug utilization among outpatients with dyspepsia at RSUD Tuan Rondahaim in 2025. The research employed a descriptive study design with a retrospective approach, using prescription data obtained from RSUD Tuan Rondahaim Pamatang Raya for the year 2025. This study used prescription data from outpatients diagnosed with dyspepsia who received dyspepsia drug therapy during the period January–April 2025. The sample consisted of 100 patients who met the inclusion criteria with a diagnosis of dyspepsia at RSUD Tuan Rondahaim Pamatang Raya in 2025.

Dyspepsia Patients Based on Gender

The classification of patients by gender aimed to identify which gender was more frequently affected by dyspepsia. The distribution of dyspepsia patients by gender is presented in Table 1.

Table 1. Distribution of Dyspepsia Patients by Gender at RSUD Tuan Rondahaim Pamatang Raya, 2025

No.	Gender	Number of Dyspepsia Patients	Percentage (%)
1	Male	44	44
2	Female	56	56
Total		100	100

Based on Table 1, it can be observed that dyspepsia patients were predominantly female, with 56 patients (56%), compared to male patients, totaling 44 patients (44%). This indicates that women have a higher risk of experiencing dyspepsia. This condition is related to psychological factors, as women tend to be more emotionally sensitive. Emotional disturbances such as anxiety, stress, and unstable emotional states can trigger increased gastric acid secretion, thereby contributing to the development of dyspepsia (Dewi, 2017). Psychological stress stimulates increased gastric acid secretion and gastric contractions, which may result in dyspepsia symptoms if stress persists (Bintariwisma, 2014).

In addition, dietary factors also play a role. Irregular eating patterns, such as delayed meals or long intervals between meals, may increase the risk of dyspepsia. Women often ignore hunger due to workload demands or environmental influences, including social and electronic media exposure.

Dyspepsia Patients Based on Age Group

This section describes the distribution of dyspepsia patients by age group. Patients were classified into several age categories. The age distribution is presented in Table 2.

Table 2. Distribution of Dyspepsia Patients by Age Group at RSUD Tuan Rondahaim Pamatang Raya, 2025

No.	Age Group (Years)	Number of Dyspepsia Patients	Percentage (%)
1	18–25	2	2
2	26–35	3	3
3	36–45	6	6
4	46–55	24	24
5	56–65	65	65
Total		100	100

Based on Table 5.2, the majority of dyspepsia patients were in the 56–65 years age group, with 65 patients (65%). This was followed by the 46–55 years age group with 24 patients (24%). The incidence of dyspepsia tends to increase with age, as aging is associated with decreased physiological function and lifestyle factors such as irregular eating habits, smoking, and alcohol consumption, which may increase the risk of dyspepsia (Suliwati, 2013). Additionally, older adults are more susceptible to dyspepsia due to declining gastric mucosal defense mechanisms and psychological factors related to stress and social environment.

Dyspepsia Patients Based on Diagnosis

This subsection describes the distribution of patients based on the diagnosis of dyspepsia.

Table 3. Distribution of Dyspepsia Patients by Diagnosis at RSUD Tuan Rondahaim Pamatang Raya, 2025

No.	Diagnosis	Number of Patients	Percentage (%)
1	Dyspepsia	100	100
Total		100	100

Based on Table 5.3, all patients included in this study were diagnosed with dyspepsia without accompanying comorbid diseases, accounting for 100 patients (100%). Dyspepsia symptoms may be triggered by emotional stress, anxiety, and psychological pressure, which can increase gastric acid secretion and lead to dyspeptic symptoms (Dewi, 2017).

Profile of Dyspepsia Drug Utilization

The analysis of dyspepsia drug utilization was based on several parameters, including drug class, drug name, dosage, dosage form, route of administration, frequency, and combination therapy. The data were obtained retrospectively from outpatient prescriptions.

Dyspepsia Drug Utilization Based on Drug Class

The distribution of dyspepsia drugs by pharmacological class at RSUD Tuan Rondahaim Pamatang Raya is shown in Table 4.

Table 4. Distribution of Dyspepsia Drug Classes

No.	Drug Class	Drug Name	Dosage	Frequency	Number of Prescriptions	Percentage (%)
1	Antacid	Antacid	Al(OH) ₃ 200 mg / Mg(OH) ₂ 200 mg	3 × 1	6	4.29
2	Proton Pump Inhibitors (PPI)	Lansoprazole	30 mg	2 × 1	35	25.00

No.	Drug Class	Drug Name	Dosage	Frequency	Number of Prescriptions	Percentage (%)
		Omeprazole	20 mg	2 × 1	42	30.00
3	Sucralfate	Sucralfate	500 mg	3 × 1	38	27.14
4	Prokinetic	Domperidone	10 mg	3 × 1	17	12.14
		Ondansetron	4 mg	2 × 1	5	3.43
					143	100

Based on Table 4, the most frequently prescribed dyspepsia drug class was Proton Pump Inhibitors (PPIs), with a total usage of 42 prescriptions (30%), followed by Sucralfate with 38 prescriptions (27.14%). PPIs function by inhibiting gastric acid secretion through suppression of the H⁺/K⁺-ATPase enzyme, thereby reducing gastric acidity (Zhang et al., 2014). Sucralfate acts as a gastric mucosal protector by forming a protective barrier over ulcerated areas and binding to proteins such as albumin and fibrinogen, thus preventing further mucosal damage.

Table 5. Dosage Forms of Dyspepsia Medication

No.	Route of Administration	Dosage Form	Drug Name	Number of Uses	Percentage (%)
1	Oral	Tablet	Antacid	2	1.43
2	Oral	Tablet	Domperidone	17	12.14
3	Oral	Tablet	Ondansetron	2	1.43
4	Oral	Capsule	Lansoprazole	35	25.00
5	Oral	Capsule	Omeprazole	42	30.00
6	Oral	Syrup	Antacid	4	2.86
7	Oral	Syrup	Sucralfate	38	27.14
Total				140	100

Based on Table 5, the most frequently used dosage form was capsules, particularly omeprazole, with 42 uses (30%). Capsule dosage forms are widely used because they offer optimal drug stability and rapid absorption. Capsules also minimize unpleasant taste and odor, improving patient compliance. Compared to tablets, capsules are considered more effective due to better bioavailability and patient acceptance, especially in oral administration (Nasif, 2013).

Table 6. Concomitant Medications in Dyspepsia Patients

No.	Drug Class	Drug Name	Number of Uses	Percentage (%)
1	Gastroprotective	Buscopan	4	6.45
2	Antiemetic	Paracetamol	5	8.06
3	Analgesic	Na-Diclofenac	16	25.81
4	NSAIDs	Mefenamic Acid	2	3.23
5	NSAIDs	Ibuprofen	4	6.45
6	Antiemetic	Neurodex	1	1.61
7	Supplement	Glucosamine	3	4.84
8	Multivitamin	Vitamin B-Complex	14	22.58
9	Vitamin	Vitamin C 50 mg	2	3.23
10	Vitamin	Vitamin D 1000	1	1.61
11	Herbal	Curcuma	10	16.13
Total			62	100

Based on Table 5.6, the most frequently prescribed concomitant medications were analgesics, specifically Na-Diclofenac, accounting for 16 prescriptions (25.81%), followed by Vitamin B-Complex with 14

prescriptions (22.58%). Vitamin B-complex plays a role in enhancing metabolism, increasing appetite, and improving overall body endurance, which supports the recovery process.

Na-Diclofenac is an analgesic commonly prescribed as adjunct therapy to reduce abdominal pain associated with dyspepsia. Its analgesic and anti-inflammatory effects help alleviate discomfort commonly experienced by dyspepsia patients. No antibiotics were prescribed in this study, indicating that dyspepsia cases were not associated with *Helicobacter pylori* infection. Therefore, adjunct therapy mainly consisted of vitamins and analgesics.

Combination Therapy for Dyspepsia

Combination therapy analysis aimed to determine the variation and frequency of drug combinations used in dyspepsia treatment.

Table 7. Combination Therapy of Dyspepsia Medications

No.	Therapy Type	Drug Class	Drug Name	Number of Patients	Percentage (%)
1	Single	Antacid	Antacid	3	3
		PPI	Omeprazole	31	31
		PPI	Lansoprazole	17	17
		Sucralfate	Sucralfate	8	8
2	Combination 2 Drugs	Antacid + PPI	Antacid + Omeprazole	2	2
		Prokinetic + PPI	Domperidone + Omeprazole	3	3
		Prokinetic + PPI	Ondansetron + Omeprazole	3	3
		Sucralfate + PPI	Sucralfate + Omeprazole	7	7
		Sucralfate + PPI	Sucralfate + Lansoprazole	7	7
3	Combination 3 Drugs	PPI + Prokinetic + Sucralfate	Omeprazole + Domperidone + Sucralfate	10	10
Total				100	100

Based on Table 7, the most commonly used single therapy was omeprazole (31%), which belongs to the Proton Pump Inhibitor (PPI) class. PPIs inhibit gastric acid secretion by blocking the H⁺/K⁺-ATPase enzyme in gastric parietal cells, making them more effective than H₂-receptor antagonists (Katzung et al., 2014).

The most frequent two-drug combination was sucralfate + PPI (14%), while the most common three-drug combination was omeprazole + domperidone + sucralfate (10%). Sucralfate acts as a mucosal protective agent by forming a protective barrier over gastric ulcers, while prokinetics improve gastric emptying and reduce nausea.

Combination therapy is beneficial in managing dyspepsia because it simultaneously reduces gastric acid secretion, protects the gastric mucosa, and improves gastrointestinal motility (Katzung, 2015). Antacids work by neutralizing excessive gastric acid, thereby protecting the gastric mucosa from inflammation. Antacids are generally recommended to be taken 1–3 hours after meals (Panggabean, 2017). In the management of gastrointestinal disorders, combination therapy is frequently used because multiple factors can contribute to digestive system disturbances, resulting in a wide range of symptoms experienced by patients (Suyono, 2014)..

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4. Conclusion

Based on the results of the study on the profile of drug utilization among outpatients with dyspepsia at RSUD Tuan Rondahaim Pamatang Raya in 2025, it can be concluded that the majority of dyspepsia patients were female (56%), with the highest incidence occurring in the 56–65-year age group (65%). The most frequently used dyspepsia medication was from the Proton Pump Inhibitor (PPI) class, particularly omeprazole (30%), which was predominantly administered orally in capsule form. The most commonly prescribed concomitant medication was vitamin B-complex (23.58%). In terms of therapy patterns, single-drug therapy with omeprazole was the most common (31%), followed by two-drug combination therapy consisting of a cytoprotective agent and a PPI, namely sucralfate and lansoprazole (13%), while the most frequent three-drug combination therapy involved a PPI, a cytoprotective agent, and a prokinetic, specifically lansoprazole, sucralfate, and domperidone (10%).

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