

Clinical Profile of Primary Headache Patients

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Article Information

Submitted: 15 October 2025

Accepted: 23 October 2025

Publish: 30 October 2025

Keyword: Primary Headache;
Migraine; Tension-type
Headache; Cluster-type
Headache;

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Year: 2025

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Abstract

Introduction: Primary headache is a neurological disorder not caused by structural abnormalities or other medical conditions. It affects people globally and can occur across different ages, genders, and socioeconomic backgrounds. **Objective:** This study aims to describe the demographic and clinical profile of patients diagnosed with primary headache at the Tanjung Priok Health Center during January–December 2023. **Method:** A descriptive cross-sectional approach was used. Data were collected through a total sampling technique based on patient medical records. A total of 125 patients met the inclusion criteria. **Result and Discussion:** The most prevalent diagnosis was tension-type headache, accounting for 74.4% of cases. Most patients were female (61.6%) and aged between 31 and 60 years (51.2%). Housewives represented the largest occupational group (52.8%). Medication was the most frequently used treatment (90.4%). These findings suggest that hormonal, lifestyle, and psychosocial factors may contribute to the higher prevalence among adult women. **Conclusion:** Tension-type headache was the dominant form of primary headache. Most cases occurred in women aged 31–60 years, predominantly housewives, with medication being the main therapeutic option.

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Introduction

Headache is one of the most common neurological complaints experienced by humans and frequently encountered in medical and neurological practice. It is characterized by discomfort or pain that radiates from the area below the chin to the occipital region and part of the neck (Nadeak, Manik, & Destine, 2025). Headache may serve as an early warning sign or symptom of either systemic or intracranial diseases. Therefore, comprehensive documentation, including detailed anamnesis, physical examination, and differential diagnosis, is essential to distinguish intracranial disorders from systemic causes (Scotton et al., 2019); (Fitriyani & Andhara, 2023). The third edition of the International Classification of Headache Disorders (ICHD-3) lists systemic diseases such as anemia, hyperaldosteronism, adrenocortical insufficiency, and mineralocorticoid deficiency as potential causes of secondary headache, while imaging evidence such as intracranial bleeding, skull fractures, or brain contusions confirms intracranial pathology (International Headache Society, 2018); (Susanti, 2020)

Globally, headache represents a major public health concern affecting individuals across all ages, races, and socioeconomic levels. According to the Global Burden of Disease Study (GBD, 2019), headache ranks third among 369 diseases and injuries as a cause of disability worldwide. It negatively impacts daily functioning, productivity, and social interaction, while increasing the financial burden and healthcare utilization (Steiner et al., 2015); (Sudershan et al., 2023). The World Health Organization (WHO, 2021) estimates that approximately 40% of adults worldwide experience at least one episode of headache each year, making it one of the three most prevalent neurological disorders across the lifespan. Similarly, a global analysis by Stovner, Hagen, Linde, & Steiner, 2022 reported that the prevalence of headache disorders reaches 52% of the population. A study in Vietnam also showed high prevalence among medical students, emphasizing the global burden among young adults (Vo et al., 2024)

Primary headaches—comprising migraine, tension-type headache (TTH), and cluster headache—occur independently without underlying structural or systemic abnormalities (International Headache Society, 2018). A global study by GBD (2022) reported that 14% of individuals experience migraine, 26% suffer from TTH, and 4.6% have other types of primary headache. In Indonesia, research by Fahmi et al. (2020) found that 65.2% of patients suffered from TTH, while a study by Agusti (2021) in Kendari reported a prevalence of 62.7% for TTH among community members. Similarly, Melinda (2021) and Zafira, Tursina, & Hendryanny (2023) identified TTH as the most common type among primary care patients and university students, respectively. Local health data from the North Jakarta Health Office also show that headache consistently ranks among the top ten diseases reported over the last four years (Melinda, 2021); (Zafira, Tursina, & Hendryanny, 2023)

Although primary headache significantly affects physical and mental well-being, research in Indonesia—particularly at the primary healthcare level—remains limited. Damayanti et al. (2021) emphasized the need for broader clinical profiling in outpatient settings (Damayanti, Marhaendraputro, Santoso, & Rahmawati, 2021). Sitinjak (2023) also underlined the necessity of epidemiological data to support health policy for headache management (Sitinjak, 2023). Notably, no previous studies have been conducted at the Tanjung Priok Community Health Center, despite its high patient volume and diverse urban population. In a related context, stress and occupational factors, including unemployment and screen exposure, are reported to exacerbate headache episodes (Hasanah & Rozali, 2021); (Zafira et al., 2023)

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Therefore, this study aims to describe the demographic and clinical profile of patients with primary headache at the Tanjung Priok Health Center during January–December 2023, including distribution by age, gender, occupation, type of primary headache, and therapy options (Steiner et al., 2015). The findings are expected to contribute to improving local headache management strategies and public health awareness.

Method

This research employed a descriptive cross-sectional design to analyze secondary data from medical records of patients diagnosed with primary headache at the Tanjung Priok Community Health Center during January–December 2023. The study was conducted in January 2024 at the same facility.

The study population consisted of all patients diagnosed with primary headache within the specified period, and total sampling was used, in which the entire population that met the inclusion criteria was included as the research sample. Inclusion criteria comprised patients diagnosed with primary headache, treated at the Tanjung Priok Health Center between January and December 2023, and possessing complete medical record data. Exclusion criteria included incomplete medical record information, comorbid hypertension, and diagnosis of secondary headache.

The dependent variable in this study was primary headache, while the independent variables included gender, age, occupation, and therapy preference. Operational definitions were established for each variable to ensure measurement consistency based on nominal and interval scales derived from medical record data.

Data collection utilized secondary data instruments through medical record documentation. All collected data were processed and analyzed descriptively using IBM SPSS version 27. The analysis focused on frequency distribution to describe the characteristics of patients, including demographic factors, types of primary headache, and therapeutic management.

Result and Discussion

1. Result

Data from 190 primary headache patients were collected; 125 met the inclusion criteria. Nine were excluded due to incomplete records and 56 for hypertension. Univariate analysis using SPSS 27 described the frequency of headache type, gender, age, occupation, and therapy preference.

Table 1.

Frequency Distribution of Patients by Type of Primary Headache		
Type of Primary Headache	Frequency (n)	Percentage (%)
Migraine with aura	4	3.2
Migraine without aura	21	16.8
Tension-type headache (TTH)	93	74.4
Cluster headache	7	5.6
Trigeminal autonomic headache	0	0.0
Total	125	100.0

Of 125 patients, 4 (3.2%) had migraine with aura, 21 (16.8%) had migraine without aura, 93 (74.4%) had tension-type headache, 7 (5.6%) had cluster headache, and none (0%) had trigeminal autonomic headache.

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Table 2
Frequency Distribution of Patients by Gender

Gender	Frequency (n)	Percentage (%)
Male	48	38.4
Female	77	61.6
Total	125	100.0

Female patients constituted the majority (61.6%), while male patients accounted for 38.4% of the total.

Table 3
Frequency Distribution of Patients by Age Group

Age Group (Years)	Frequency (n)	Percentage (%)
≤ 30 years	55	44.0
> 30 – ≤ 60 years	64	51.2
> 60 years	6	4.8
Total	125	100.0

Of 125 patients, 55 (44.0%) were aged ≤30 years, 64 (51.2%) were between 31–60 years, and 6 (4.8%) were over 60 years.

Table 4
Frequency Distribution of Patients by Occupation

Occupation	Frequency (n)	Percentage (%)
Housewife	66	52.8
Student	7	5.6
Private employee	21	16.8
Civil servant	1	0.8
Entrepreneur	2	1.6
Laborer	4	3.2
Health worker	6	4.8
Retired	3	2.4
Unemployed	15	12.0
Total	125	100.0

More than half of the patients were housewives (52.8%), followed by private employees (16.8%) and unemployed individuals (12.0%). Other occupations were found in smaller proportions.

Tabel 5
Frequency Distribution of Patients by Therapy Preference

Therapy Preference	Frequency (n)	Percentage (%)
Non-pharmacological	12	9.6
Pharmacological	113	90.4
Total	125	100.0

Most patients (90.4%) received pharmacological therapy, while only 9.6% underwent non-pharmacological treatment.

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2. Discussion

The results showed that most patients at the Tanjung Priok Community Health Center suffered from tension-type headache (74.4%), followed by migraine without aura (16.8%), migraine with aura (3.2%), and cluster headache (5.6%). This pattern is consistent with previous studies reporting tension-type headache as the most common form of primary headache, often triggered by stress, muscle tension, fatigue, poor posture, and emotional factors.

Female patients dominated the cases (61.6%), influenced by hormonal fluctuations during menstruation, pregnancy, and menopause, as well as higher stress and anxiety levels compared to men. The majority of patients were aged 31–60 years (51.2%), reflecting the impact of occupational and emotional stress during productive years.

Housewives represented the largest occupational group (52.8%), likely due to physical and mental workload, lack of rest, and limited emotional support. In terms of therapy, pharmacological treatment was the main management approach (90.4%), while only 9.6% received non-pharmacological therapy. Common medications included paracetamol, ibuprofen, and corticosteroids, aiming to reduce pain and improve quality of life.

Overall, the findings indicate that tension-type headache is the predominant primary headache, mostly affecting women of productive age, with pharmacological therapy remaining the primary treatment option at the community health level.

Conclusion

Based on the findings of the study on the profile of primary headache patients at the Tanjung Priok Community Health Center from January to December 2023, it can be concluded that tension-type headache was the most common diagnosis, affecting 93 out of 125 patients (74.4%), while migraine with aura was the least frequent, occurring in 4 patients (3.2%). The majority of patients were female (61.6%), indicating a possible hormonal and psychosocial influence on headache prevalence. Most cases occurred among individuals aged 31–60 years (51.2%), suggesting that productive-age adults are more prone to headache due to occupational and emotional stress. Housewives represented the largest occupational group (52.8%), reflecting the combined physical and mental workload associated with domestic responsibilities. In terms of therapy, pharmacological treatment was the dominant approach, administered to 113 patients (90.4%), showing that medication remains the primary management method for relieving pain and improving patient well-being.

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