



## Analgesics Self-Medication Among Community In Cirebon District, Indonesia

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### ABSTRACT

**Keywords:**

Sef-Medication; Analgesic;  
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Background: Self-medication with analgesics may cause inappropriate medication and potentially dangerous side effects. However, data on analgesic self-medication profiles in Cirebon, Indonesia, is still limited. Aims: This research aims to analyze the profile of self-medication with analgesics among the Cirebon District, Indonesia community. Methods: An observational study with a cross-sectional approach was conducted in 5 pharmacies in the Cirebon District. The sample in this study was people who bought analgesics without a doctor's prescription at the pharmacy. Primary data were obtained through a questionnaire regarding sociodemographic characteristics, reasons for self-medication, and sources of information in choosing analgesics. Results: 470 respondents participated in this study, consisting of 35.96% male and 64.04% female. The majority of samples were 31-55 years old (54.9%), worked as housewives (36.60%), senior high school graduates (39.15%), married (74.68%), and had low income (60.43%). Only 13.83% of the sample has health insurance (private or national health insurance). Most of the samples performed self-medication with analgesic because they were used to doing it (34.25%). Most of the samples received information about analgesics they consumed from health workers (39.79%). Conclusion: Self-medication with analgesics among community in Cirebon Regency, Indonesia, is mainly carried out by low-income people because they are used to treating themselves. They get information about analgesics purchased from health workers. Prevention needs to be done through promotion and education to the public regarding the side effects of self-medicated analgesics so that they do not use them without consulting a doctor.

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Artikel dengan akses terbuka dibawah lisensi



## Introduction

Self-medication is an effort to treat self-diagnosed symptoms carried out by ordinary people without consulting a doctor. It is usually done to deal with minor symptoms, such as cough, pain, fever, diarrhea, and others. However, self-medication is also often carried out in chronic or recurrent diseases. Some people choose to treat their symptoms themselves because it saves money and time. However, drug consumption with inappropriate indications and dosage can cause medication errors, which can be fatal (Ibrahim et al., 2015; Makowska et al., 2020; Torres et al., 2019).

Analgesics is a class of drugs that are often used in self-medication to treat pain symptoms such as headaches, joint pains, aches, and others (Barros et al., 2019; Kiza et al., 2021). It can actually be purchased without a prescription, but it must be in the correct indication and dosage. It also should not be consumed in the long term because long-term analgesic consumption can cause gastrointestinal bleeding and other complications, even causing death (Tielleman et al., 2015).

Research on self-medication practices, particularly concerning analgesics, has been conducted globally; however, studies focused on specific communities, like in Cirebon District, Indonesia, remain sparse. Most existing studies are generalized and fail to address the distinct sociodemographic factors influencing self-medication behaviors in different regions. This gap in research presents an opportunity to explore the profile of self-medication with analgesics in Cirebon, where local cultural and economic conditions may significantly impact health practices. Furthermore, the novelty of this study lies in its focus on low-income communities, where self-medication is more prevalent, and its investigation of the sources of information that guide such decisions, such as health workers and pharmacies.

This study aims to fill this gap by analyzing the profile of analgesic self-medication among the Cirebon community, identifying the demographic patterns, reasons for self-medication, and sources of information that influence purchasing behaviours. The results will provide insights into the broader implications of self-medication, emphasizing the need for public health campaigns to educate communities on the dangers of self-medication and the importance of consulting healthcare professionals before using medications.

Previous research and data on self-medication with analgesics among the community in the Cirebon District are still limited. Self-medication behavior among ordinary people should be a concern because of its huge impact on health. Based on this background, the researcher is interested in analyzing the profile of self-medication with analgesics among the community in the Cirebon District.

## Research Method

This study is an observational study using cross-sectional methods. The research was conducted at 5 pharmacies in Cirebon District, Indonesia, from August to November 2020. The sample of this research is pharmacy visitors who buy analgesic drugs without a doctor's prescription, determined by accidental sampling technique. The inclusion criteria were samples aged >15 years and willing to become respondents. Purchases of analgesics for resale were excluded from this study. The data were obtained through questionnaires regarding sociodemography characteristics, self-medication reasons, and sources of information on

analgesic selection. Data were presented descriptively to show the frequency and percentage of each research variable.

This research has obtained ethical clearance from the Health Research Ethics Committee of Gunung Jati Hospital, Cirebon City, with No. 070 / LAIKETIK / KEPKRSJGJ / VIII / 2020.

## Result and Discussion

There were 470 respondents who participated in this study, consisting of 35.96% male and 64.04% female. More than half of the samples (54.9%) were 31-55 years old. Most of the sample occupations were housewives (36.60%), and 1.70% of the samples were health workers (midwives, nurses). The majority of the sample was senior high school graduates (39.15%), married (74.68%), and low-income (60.43%). Only 13.83% of the sample has health insurance (private or national health insurance).

The results of this study identified several sources of information regarding self-medication with analgesics, including health workers (39.79%), family (17.87%), pharmacy officers (12.77%), friends (9.57%), neighbors (7.23%), advertisements (0.85%) and internet (0.43%). About half of the sample (52.3%) live close to a health facility (<10km). There were several reasons for self-medicating analgetics, including accustomed to doing it (34.25%), saving money (26.17), and mild symptoms (22.34%). There were 15.53% of the sample who self-medicated on analgetics because they were afraid of contracting COVID-19 when they went to a health facility.

**Table 1. Baseline characteristics of sample (n=470)**

Baseline characteristics	Frequency	Percentage
Gender		
Male	169	35.96
Female	301	64.04
Age (years)		
≤30	160	34.0
31-55	258	54.9
>55	52	11.1
Marriage status		
Yes	351	74.68
No	119	25.32
Occupation		
Health worker	8	1.70
Government employee	5	1.06
Farmer	9	1.91
Private employee	67	14.26
Merchant	75	15.96
Housewife	172	36.60
University student	58	12.34
Others	76	16.17
Education level		
Elementary school	123	26.17
Junior high school	123	26.17
Senior high school	184	39.15
University graduates	40	8.51
Income (per month)		
Low (<1.800.000 IDR)	284	60.43

Middle (1.800.000 – 3.600.000 IDR)	123	26.17
High (>3.600.000 IDR)	63	13.40
Have health insurance		
Yes	65	13.83
No	404	85.96
Source of information		
Health workers	187	39.79
Family	84	17.87
Friends	45	9.57
Neighbour	34	7.23
Internet	2	0.43
Pharmacy clerk	60	12.77
Advertisement	4	0.85
Others	54	11.49
Distance to health facilities		
<10 km	246	52.3
10-20 km	191	40.6
>20 km	33	7.0
Reasoning		
Saving time	53	11.27
Saving money	123	26.17
Emergency condition	14	2.97
Mild symptom	105	22.34
Used to do it	161	34.25
Worried about going to a health facility because of COVID-19	73	15.53
Others	32	6.80

## Discussion

The results of this study indicate that people in the 30-55 year age group tend to perform self-medication with analgesics more frequently than other age groups. These results are consistent with a study conducted by Jain et al. in India, which showed that adult patients (31-40 years) performed analgesic self-medication more frequently than other age groups. (Jain et al., 2016) Research conducted by Halim et al. (2018) in Surabaya, Indonesia, also found that self-medication with analgesics was mostly carried out by adults aged 26-45 years

Sex differences can cause differences in the mean frequency of self-medication with analgesics. Women practice self-medication more often than men especially housewives. These results are consistent with the research of Halim et al. (2018), which shows that women perform self-medicating analgesics more often than men. According to Indonesia Basic Health Research, in 2013, 35.2% of housewives stored medicines for self-medication, of which 35.7% were prescription drugs. They keep medicine to stock at home and can be used when a family member is sick (Health, 2013; Pratiwi & Handayani, 2020). However, a study conducted by Halim et al. (2018) found different results that men did self-medication with analgesics more than women.

Senior high school graduate and below did self-medication with analgesics more often than university graduates. The results of the study by Halim et al. (2018) Also found the same result. This study also found that many elementary and junior high school graduates did analgesic self-medication. This may be because education level is associated with low level of

knowledge about self-medication, which encourages them to self-medicate without considering the adverse effects that can occur.

People with low-income levels tend to perform analgesic self-medication more frequently than other groups. This is the same as the results of research by Jain et al. (2016). This can be caused by the limited money that low-income communities need to go to health facilities. The issue should no longer be a barrier to seeking health services in Indonesia because of National Health Insurance, which is mandatory for all Indonesian citizens. However, based on the results of this study, only 13.83% of the sample had health insurance. Based on the results of this study, the government needs to optimize the socialization of national health insurance membership, which is obligatory for all Indonesian citizens.

People who self-medicate get information about the type and name of the medicine from health workers (doctors, nurses, midwives) during their previous illness experience. They will buy the same drug when they experience the same complaints.

Most of the samples who performed analgesic self-medication had homes close to health facilities (<10 km). Cirebon District has an area of 1,072 km<sup>2</sup>, with 40 sub-districts, 12 hospitals, and a total of 60 public health centers so that the community can easily reach health facilities. (Dinas Kesehatan Kabupaten Cirebon, 2020)

The results of this study indicate that the three most common reasons for people to self-medicate are that they are used to using the drug, saving money, and having mild symptoms of illness. This result is in line with previous research conducted by Farizal (2015), which states that the most common reasons for self-medicating are the habit of taking the drug, information from other people, and saving money.

The limitation of this study is that it only describes descriptively the self-medicated analgesic profile.

## Conclusion

Self-medication with analgesics among the community in Cirebon Regency, Indonesia, is mainly carried out by low-income people because they are used to treating themselves. They get information about analgesics purchased from health workers. Prevention needs to be done through promotion and education to the public regarding the side effects of self-medicated analgesics so that they do not use them without consulting a doctor.

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