



## ATTITUDES AND BEHAVIORS OF SELF-MEDICATION AMONG HAJJ PILGRIMS IN BATU CITY

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### Abstract

Self-medication is the practice of selecting and using medications on one's own without a doctor's prescription. Every individual must have qualified knowledge, attitudes, and behaviors to do self-medication. Self-medication is very important for a person in maintaining his health, including when performing Hajj. Self-medication measures can help Hajj pilgrims to achieve *istithaah* conditions and maintain their health in Saudi Arabia. The purpose of this study was to determine the attitude and self-medication behavior of Hajj pilgrims in Batu City. This study included descriptive observational using cross sectional survey method. The sampling this study using of consecutive sampling approach. Data collection was carried out through filling out questionnaires that have been tested for validity and reliability. The results of the study on 60 hajj pilgrims in Batu City showed that 75.83% of pilgrims were self-medicated in the "good" categories of attitude and 76.4% of Hajj pilgrims were also in the "good" categories of behavior. Based on this, it can be concluded that the attitude and self-medication behavior of the Batu City Hajj pilgrims were good.

**Keywords:** *Self-medication, Attitude, Behavior, Hajj Pilgrims.*

### Introduction

Self-medication is the most common effort made by the community to overcome the health problems they experience. The percentage of Indonesian people who do self-medication continues to increase every year, in East Java Province alone the number of people who do self-medication in 2020 is 71.61%, in 2021 it is 83.80%, and in 2022 it is 84.41% (Central Bureau of Statistics, 2022). The results of research in Saudi Arabia conducted by Al Essa (2019) aimed at health science students in Riyadh, as many as 73.2% of respondents behaved poorly in self-medication, these results are in line with research in Japan by Ueno (2021) that the attitudes and behavior of self-medication to treat minor illnesses shown by respondents were also in the bad category. The results of research also conducted by Maharianingsih (2023) found that the knowledge and attitudes of the Denpasar City community towards self-medication were quite good with a percentage of 67.25% for knowledge and 65.50% for attitudes. Self-medication must be carried out properly and correctly, if self-medication is carried out incorrectly it can have a fatal impact on health including



the emergence of new diseases due to incorrect treatment, high side effects, overdose, drug abuse and dependence on drugs (Puspita *et al.*, 2020).

Indonesia is a country where the majority of the population adheres to Islam and is one of the largest suppliers of pilgrims in the world. There are several factors that become challenges in the implementation of the Hajj pilgrimage, namely the density of pilgrims, extreme climatic conditions, climate differences, the high potential for infectious diseases and others (Sulaiman *et al.*, 2019). The magnitude of these risk factors causes the death rate of Indonesian pilgrims to be high, which ranges from 200-300 per 100,000 pilgrims each year. Based on data from the Ministry of Religious Affairs of the Republic of Indonesia, the average case of death of pilgrims in the last three years reached 131 cases (Ministry of Religious Affairs of the Republic of Indonesia, 2022).

One of the mandatory requirements of Hajj that must be met is being able (*istithaah*), both financially and health-wise. Minister of Health Regulation No. 15/2016 on Hajj health *istithaah*, explains that health checks and guidance for each pilgrim must be carried out to achieve *istithaah*. Health coaching efforts are needed by every Hajj pilgrim long before the time of departure and during the waiting time for departure, the pilgrims are expected to be able to improve their attitude and behavior of self-medication to treat minor illnesses independently. Self-medication can help pilgrims in maintaining their health in the Holy Land considering that the series of worship performed is quite heavy if not balanced with excellent health conditions.

## Implementation Method

This research was conducted at the Batu City Ministry of Religious Affairs Office in September 2023. The type of research used is descriptive observational with a cross sectional approach method and sampling in this study using nonprobability sampling techniques with a consecutive sampling approach where sampling in this study was carried out by selecting several individuals who met the research criteria (Sandi & Bakri, 2021). The population in this study was 132 pilgrims and the sampling calculation used the Slovin formula as follows:

$$n = \frac{N}{N.(d^2) + 1}$$

Description

n = sample size

N = Population

d = margin of error

The population used is 132 people, with the formula above, the number of samples can be found, namely:

$$n = \frac{132}{132.(0,01)+1} = \frac{132}{2,32} = 56.89 \text{ or } 57 \text{ respondents}$$

The sample obtained based on the above formula obtained 57 respondents and rounded up to 60 respondents. Data was obtained through a questionnaire sheet containing 8 questions each regarding attitudes and behaviors that had previously passed validity and reliability tests. The measurement scale in this study uses a Likert scale to determine the value of several questionnaire statement items given to respondents with answer values divided into 5 criteria, namely strongly agree, agree, neutral, disagree and strongly disagree with a maximum value of 5 and a minimum value of 1 (Marbun *et al.*, 2023)

In order to obtain the results of data interpretation from the questionnaire to be processed, the total score of each questionnaire item and the total score of the entire questionnaire must be

known. Then the assessment of each questionnaire item can be calculated using the following formula:

Y = Likert highest score x number of respondents (highest number 5)

X = Lowest Likert score x number of respondents (lowest number 1)

The data results obtained from the total score of each questionnaire item are calculated using the percentage index formula (%), namely:

$$\text{Index Formula \%} = \frac{\text{Total Score}}{X/Y} \times 100 \%$$

The percentage index results are then confirmed using the predetermined percentage score criteria. So that the questionnaire score interpretation criteria can be obtained, namely 0% - 19.99% (Very Bad); 20% - 39.99% (Not Good); 40% - 59.99% (Enough); 60% - 79.99% (Good); 80% - 100% (Very Good) (Marbun *et al.*, 2023).

## Results and Discussion

### A. Respondent Characteristics

The sample obtained has several characteristics, namely based on gender, age, education, occupation and income level. The classification of respondents in several characteristics aims to determine the respondent's information as the object of research clearly (Stoś *et al.*, 2022). The characteristics of the Batu City pilgrims can be seen in Table 1 below:

**Table 1.** Characteristics of Hajj Pilgrims in Batu City

Variables	Total	%
<b>Gender</b>		
Male	33	55
Female	27	45
<b>Age</b>		
26 - 35 years old	2	3
36 - 45 years old	6	10
46 - 55 years old	20	33
56 - 65 years old	23	38
>65 years old	9	15
<b>Education</b>		
Kindergarten	1	2
Elementary School	10	17
Junior High School	11	18
High School / Equivalent	12	20
College	26	43
<b>Jobs</b>		
Housewife	11	18
Laborer/handyman	1	2
Farmer	7	12
Self-employed	18	30
Civil Servants	23	38
<b>Income</b>		
Rp. <1.000.000	6	10
Rp.1.000.000- 2.000.000	15	25
Rp.2.000.000- 3.000.000	13	22
Rp.3.000.000- 4.000.000	9	15
Rp. >4.000.000	17	28

Batu City pilgrims in this study were dominated by male pilgrims with a percentage of 55% or 33 people. The age of the pilgrims who dominated in this study was in the age range of 56-66 years with a percentage of 38%. The queue or waiting period for the hajj pilgrimage in Indonesia is 10 to 20 years from registration to departure (Syarif, 2023). The long Hajj departure time and the large number of Hajj applicants cause Indonesian Hajj pilgrims to be dominated by the elderly whose health conditions are prone to decline so that health maintenance through self-medication is needed in the implementation of the Hajj pilgrimage

A total of 43% of Batu City pilgrims took their last education at the tertiary level. The higher the education of the pilgrims, the pilgrims will be able to think more logically about their health so that they are more careful in doing self-medication

Batu City pilgrims mostly work as civil servants, namely 38%. The type of work of pilgrims can influence thinking patterns before deciding on the selection of drugs in self-medication that will be used to treat their complaints (Papeo & Tuloli, 2023). The majority of pilgrims earn 1,000,000 - 2,000,000 as many as 15 respondents (25%) and respondents earning >4,000,000 as many as 17 respondents (28%). Hajj pilgrims tend to make cost the main consideration in determining the choice of health services and treatment based on their income level. The higher the income of the pilgrims, the easier it will be to meet their health needs both by consulting a doctor and by self-medication (Pariyana *et al.*, 2021).

### B. Self-medication Attitudes of Hajj Pilgrims in Batu City

The percentage of self-medication attitude in this study was obtained from the total score of all respondents / maximum score x 100 and the results obtained in Table 2 below:

**Table 2.** Self-medication Attitude of Hajj Pilgrims in Batu City

Self-medication Attitude Indicator	Percentage	Category
How to do self-medication	86.5	Very good
Appropriate use of medication	59	Enough
Examples of drugs in self-medication	60	Good
How to store medicine	82.5	Very good
<b>Total</b>	<b>75.83</b>	<b>Good</b>

The pilgrims of Batu City have a good attitude in self-medication with a percentage of 75.83%. A good attitude in self-medication is a provision for every pilgrim to achieve *istithaah* conditions and to maintain their health in Saudi Arabia, because there are several factors that can affect the health of pilgrims, namely the severity of worship performed, the density of pilgrims, extreme climatic conditions, the potential for infectious diseases and others (Sulaiman *et al.*, 2019). Attitude is the readiness to react to objects in a certain environment, which reflects a person's understanding of the object (Madania & Pakaya, 2021). The attitude of self-medication can be seen from the value of the results of 8 statements which have been categorized into 4 indicators in Table 3 as follows:

**Table 3.** Indicators of Self-medication Attitude of Hajj Pilgrims in Batu City

Self-medication Attitude Statement	Percentage of Answers (%)				
	Strongly Agree	Agree	Doubtful	Disagree	Strongly Disagree
<b>Indicators of how to do self-medication</b>					
Self-medication is usually done for minor illnesses/disorders without a prescription from a doctor.	32	62	0	7	0
Before doing self-medication, you must recognize the symptoms or complaints experienced.	38	60	2	0	0
Self-medication is safe if it is used according to the rules in the etiquette or medicine package.	35	60	5	0	0
If the disease gets worse stop self-medication and go to the doctor.	53	43	0	2	2
<b>Indicators of appropriate drug use</b>					
Twice a day means the medicine is taken once every twelve hours.	20	57	10	13	0
Medicine in liquid form is taken by tablespoon.	60	20	12	8	0
<b>Indicators of sample drugs in self-medication</b>					
Ranitidine can be used directly without a prescription.	5	18	50	25	2
<b>Indicator on how to store medicine</b>					
Store the medicine in a place that is humid and exposed to sunlight.	2	7	2	57	32

### Attitude Indicators on How to Self-Medication

The self-medication attitude of pilgrims on the indicator of how to do self-medication in the first statement, the results showed that the most, namely 62% of pilgrims gave the answer

"Agree" and only 7% gave the answer "Disagree" to self-medication is usually done to treat minor illnesses or disorders without a prescription from a doctor. These results show that the majority of pilgrims understand that self-medication is only done to treat minor illnesses without a doctor's prescription.

A total of 60% of pilgrims gave the answer "Agree" and 38% answered with "Strongly Agree" about the statement before self-medication must recognize the symptoms or complaints experienced. These results indicate that the pilgrims can recognize the symptoms they experience before self-medication. This is reinforced by previous research by Nelli that a person must try to recognize the complaints or symptoms of the disease he is experiencing and the drugs he uses when self-medicating (Nelli, 2023). In maintaining their health in the holy land, pilgrims who will perform self-medication must first know the symptoms they experience so as not to cause treatment errors that can aggravate their complaints.

The majority of pilgrims or 53% answered with "Strongly Agree" and only 2% of pilgrims gave the answer "Strongly Disagree". This shows that the attitude of most pilgrims in following up the failure of their self-medication is appropriate, namely by going to the doctor. Failure to follow up on self-medication can result in treatment errors and result in complications related to treatment that can worsen the condition (Achhami *et al.*, 2015).

### **Attitude Indicators for Appropriate Medication Use**

Most pilgrims or 57% gave the answer "Agree" and only 13% of pilgrims answered with "Disagree" about the use of medicine twice a day means that the medicine is taken every twelve hours. These results show that most pilgrims understand how to use drugs that are consumed twice a day, meaning that they are taken every twelve hours. While in the statement about medicine in liquid form taken using a tablespoon, the results showed that the majority or 60% of pilgrims gave the answer "Agree" and only 8% gave the answer "Disagree". These results indicate that the attitude of most pilgrims in using liquid preparations is still wrong, because liquid preparations should be taken using a measuring spoon or medicine spoon.

### **Attitude Indicators of sample drugs in self-medication**

A total of 50% of pilgrims gave the answer "Doubt" and 25% answered with "Disagree" regarding the use of ranitidine drugs can be used directly without a doctor's prescription. This result shows that pilgrims do not know that ranitidine is a drug that can be used for self-medication. Ranitidine is a drug used to treat gastritis symptoms, according to the Minister of Health Regulation (2022) ranitidine itself was previously a hard drug that was changed to a limited class of over-the-counter drugs. Although ranitidine can be obtained without the use of a prescription from a doctor, this drug can only be delivered by pharmacists with the conditions and dosage restrictions used (Puja *et al.*, 2022).

### **Medicine Storage Attitude Indicator**

A total of 57% of pilgrims gave the answer "Disagree" and only 2% gave the answer "Strongly Agree" regarding the statement of storing medicine in a humid place and exposed to sunlight. These results indicate that the attitude shown by the majority of pilgrims regarding how to store medicines is appropriate. These results are in line with previous research by Yezli *et al.* that the average pilgrims, namely 68.2%, have a good attitude regarding how to store medicines. Generally, pilgrims are able to store medicines properly in extreme weather in Saudi Arabia (81.2%) (Yezli *et al.*, 2021).

## **C. Self-medication Behavior of Hajj Pilgrims in Batu City**

Behavior is the way an individual reacts to a stimulus or action that can be observed, characterized by frequency, duration, and a specific purpose, whether intentional or not (Karo,

2021). The percentage of self-medication behavior of Batu City pilgrims is obtained from the total score of all respondents / maximum score x 100 and the results are obtained in Table 4 as follows:

**Table 4.** Self-medication Behavior of Hajj Pilgrims in Batu City

Indicators of Self-Medication Behavior	Percentage	Category
How to do self-medication	77	Good
Correct use of medication	76	Good
Examples of drugs in self-medication	67	Good
Actions after self-medication	86	Very Good
<b>Total</b>	<b>76.4</b>	<b>Good</b>

It can be seen that the pilgrims of Batu City have good behavior in self-medication with a percentage of 76.4%. These results are in line with previous research by Titani that as many as 97 people in Batu City have been able to do self-medication well because they are helped by advertising services on television (Titani *et al.*, 2019). Good self-medication behavior efforts by pilgrims can ease the burden on Hajj health workers in Saudi Arabia because pilgrims are able to overcome minor complaints on their own and Hajj health workers can be more focused on treating chronic and degenerative diseases (Rahmawati & Hasyimiyyah, 2020). The self-medication behavior of Batu City pilgrims is assessed from several indicators which can be seen in Table 5 below:

**Table 5.** Indicators of Self-medication Behavior of Hajj Pilgrims in Batu City

Self-medication Behavior Statement	Percentage of Answers (%)				Strongly Disagree
	Strongly Agree	Agree	Doubtful	Disagree	
<b>Indicators of How-to Self-medication</b>					
Before doing self-medication, I recognize the symptoms or complaints of the disease.	40	52	8	0	0
I use over-the-counter drugs according to the instructions on the package or brochure/leaflet.	20	53	7	17	3
In doing self-medication, I ask the pharmacist for the right drug selection and complete information.	18	55	17	10	0
I used medicine suggested by others with the same symptoms for self-medication.	3	12	15	58	12
<b>Indicators of Correct Medication Use</b>					
The rules for using the medicine three times a day, that is, I take the medicine every 8 hours	18	50	8	18	5
I used to use hard drugs without using a doctor's prescription	5	3	5	52	35
<b>Indicators of Sample Drugs in Self-medication</b>					
I usually take amlodipine immediately when my blood pressure rises	10	17	32	33	8
<b>Indicators for Follow-up of Self-Medication</b>					
If self-medication does not work (does not heal), then I immediately consult a doctor.	37	58	5	0	0

### Behavioral Indicators of How-to Self-medication

It was found that 52% of pilgrims gave an "Agree" answer and 40% gave a "Strongly Agree" answer regarding the statement before self-medication must recognize the symptoms or complaints of the disease. there are several things that must be considered before self-medication, namely obtaining information related to the drug to be used, recognizing the symptoms that arise, and following the appropriate instructions on the drug label and consulting a doctor if a medication error occurs (Qin *et al.*, 2022).

As much as 53% gave an "Agree" answer and only 3% gave a "Strongly Disagree" answer regarding the use of over-the-counter drugs according to the instructions on the package or brochure or leaflet. In general, the correct way to use medicine is to take the medicine according to the instructions on the package, if there are unexpected side effects, stop using it immediately, and do not use other people's medicines even with the same symptoms (Siampa & Edy, 2019).

Furthermore, 55% of pilgrims gave the answer "Agree" and 18% gave the answer "Strongly Agree" in carrying out self-medication, the pilgrims asked the pharmacist for the right drug selection and complete information. Providing information by pharmacists is a hope for patients in using drugs without a doctor's prescription, namely to get professional counseling and get recommendations in drug selection to achieve rational treatment (Pratiwi *et al.*, 2020).

Then 58% of pilgrims gave the answer "Disagree" and only 3% gave the answer "Strongly Agree" regarding the use of drugs suggested by others with the same disease symptoms for self-medication. Self-medication behavior carried out by pilgrims is not only necessarily based on information from other people, but must be based on their knowledge and based on recommendations from pharmacists because drug information that must be known includes composition, rules of use, time to take drugs, side effects and contra indications (Rasdianah & Uno, 2022)

### **Behavioral Indicators of Correct Medication Use**

It was found that 50% of pilgrims gave the answer "Agree" and only 5% of pilgrims who answered "Strongly Disagree" about the use of drugs three times a day means that the drug is taken every eight hours. To achieve proper self-medication, the behavior that can be done by pilgrims is to look at the rules of use on the packaging or drug brochure before use so that self-medication can be rational and there are no errors in treatment. The next statement is about the use of hard drugs without using a doctor's prescription, the results showed that most or 52% of pilgrims gave the answer "Disagree" and only 5% answered with "Agree". The drugs that can be used and most widely used by respondents for self-medication are over-the-counter (OTC) drugs (Tesfamariam *et al.*, 2019). To achieve proper self-medication, the behavior that can be carried out by pilgrims is to look at the rules of use on the packaging or drug brochure before use so that self-medication can be rational and there are no errors in treatment.

### **Indicators of Sample Drugs in Self-medication**

33% of pilgrims answered with "Disagree" and 32% of pilgrims answered with "Doubtful" regarding pilgrims immediately taking amlodipine when their blood pressure rises. These results indicate that some pilgrims are hesitant or even do not know about the provisions for using amlodipine. Amlodipine cannot be used for self-medication because this drug is a class of antihypertensive and antianginal hard drugs that are classified as dihydropyridine class (calcium ion antagonists) where its use must be based on a doctor's prescription. (Alegantina, 2015).

### **Indicators for Follow-up of Self-medication**

The self-medication behavior of pilgrims on the indicator of follow-up self-medication, the results showed that as many as 58% of pilgrims gave the answer "Agree" and 37% answered with "Strongly Agree" if the self-medication carried out was unsuccessful (not cured), then immediately consult a doctor. These results show that the follow-up of pilgrims when there is a failure in self-medication is appropriate, namely by going to the doctor. This is reinforced by previous research by Lambey *et al.* that the actions taken by respondents when they did not recover in self-medication 41% went to a practicing doctor, 26% would return to the pharmacy to buy other drugs, 20% would go to a health clinic, 10% would go to the hospital (Lambey *et al.*, 2023).

### **Conclusion**

The attitude and behavior of self-medication owned by the pilgrims of Batu City is classified as good, so that self-medication is a very important provision to achieve *istithaah* conditions and is useful to help maintain the health of pilgrims during the pilgrimage in Arab Saudi.

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