

OVERVIEW OF PUBLIC KNOWLEDGE ABOUT THE USE OF KITALOD FLOWERS (*Isotoma longiflora* L.) AS A TRADITIONAL MEDICINE FOR RED EYES

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A B S T R A C T

The background of Indonesia has a very diverse wealth of flora and fauna. Biodiversity and cultural heritage in Indonesia have long utilized various types of plants as traditional medicine that have been passed down from generation to generation. Traditional medicine has been applied since ancient times, long before chemical-based drugs were widely known. One of the herbal plants that can overcome reddish eyes is the kitalod plant (*Isotoma longiflora* L.). **The purpose** of this study is to find out the extent of public knowledge about the use of kitalod flowers as a traditional healer for red eyes in Lasalimu Village. **The method** in this study uses a descriptive survey. **The results** showed that respondents had sufficient knowledge about the use of kitalod flowers for the treatment of red eye. The results indicated that 44.8% of the respondents had sufficient knowledge, while 39.6% had good knowledge, and 15.6% had little knowledge about the use of kitalod flowers as a traditional medicine for red eyes. **The conclusion** of the study stated that the knowledge of the people of Lasalimu Village about the use of kitalod flowers (*Isotoma longiflora* L.) as traditional therapy to treat red eye is in the sufficient category. This shows that although people have a good basic understanding of the benefits and uses of this flower, their knowledge is still limited to the general aspects. The community in Lasalimu Village has not fully understood the right dosage, the importance of the sterilization process, and the risks and consequences that may occur due to incorrect use.

INTRODUCTION

The WHO or the World Health Organization recommends the use of traditional medicines, including herbal ones, to support public health and to avoid and treat diseases, especially for chronic, degenerative, and cancerous diseases. Indonesia is known as a country with a lot of natural resources, with about 30.000 types of plants out of a total of 40.000 species worldwide and approximately 9,600 of these types have medicinal properties. About 300 species have been used in cultural traditions and biodiversity in Indonesia, where various plants have been used for medicinal purposes for generations. Traditional medicine has been practiced for a long time, long before chemical medicines were famous. Many people believe that chemical drugs can cause more serious side effects compared to traditional medicine, so many people choose to use plants as medicine (Kurnia and Suswandari 2020).

The understanding of the use of medicinal plants is usually passed down through oral tradition from one generation to the next, which makes such knowledge often limited. Knowledge does not appear instantaneously, but follows a certain thought pattern with a specific approach so that it can be shared, tested, and accounted for in general. Therefore, the knowledge gained by humans through the process of thinking is always used to overcome ignorance and find solutions to the problems faced (Situmeang, 2021). The foundation of human knowledge includes reasoning and logic, where humans are the only beings capable of developing knowledge because they have the ability to think (Octavian & Ramadhani, 2021).

Traditional medicine plays an important role in public health and the development of the potential of these medicinal plants is very important. The Indonesian people are increasingly aware of the importance of using natural ingredients as traditional medicine that can be used to prevent many diseases. This is because traditional medicine tends to have fewer side effects when compared to chemical medicines. Therefore, traditional medicine can be a safer and more effective option for the community. (Duncan) *et al.*, (2023).

The use of medicinal plants has become an alternative solution for the Indonesian people to overcome health problems, both as a preventive and treatment effort. The hereditary use of medicinal plants is not only influenced by tradition and belief, but also because of people's belief in its efficacy

(Hamiyati & Laratmase, 2021). The Kitalod plant is often utilized in traditional medicine and grows wild in humid areas. The use of this plant has been passed down from generation to generation as a remedy for various diseases because it contains a variety of compounds (Scott, 2022). People usually use the flower part of the kitalod to be used as eye drops (Anggyadinata et al. 2023). Empirically, Kitalod (*Isotoma longiflora* L.) has been used by the community to cure eye problems such as conjunctivitis (Yulianto 2023). This plant contains alkaloids such as lobelin, lobelamine and isotomine. It is thought that the alkaloids, flavonoids and saponins contained in kitalod leaves can increase the production of eye fluid (Permana) *et al.*, 2022). All parts of the kitalod, including roots, stems, flowers, leaves and fruits, contain bioactive substances (Egarni *et al.*, 2020).

Conjunctivitis is an inflammation that occurs in the conjunctiva. The causes are usually infections, either from bacteria or viruses, problems with immunity, mechanical disorders, or abnormal cell growth. Conjunctivitis is divided into two categories, namely infectious and non-infectious. In addition, when viewed from the duration of symptoms, conjunctivitis can be distinguished into acute and chronic. For infectious conjunctivitis, viral and bacterial are the most common causes, while non-infectious conjunctivitis arises due to allergies, reactions to toxins, and inflammation associated with other conditions. Symptoms of acute conjunctivitis last up to four weeks, while in chronic ones, symptoms last more than four weeks (Meridian) *et al.*, 2020). Conjunctivitis is an eye disease that causes red eye complaints due to inflammation of the conjunctiva. The common causes of conjunctivitis are mainly derived from bacteria such as *Staphylococcus aureus*, *Staphylococcus epidermidis*, *Streptococcus pneumoniae*, *Escherichia coli*, *Klebsiella pneumoniae*, and *Enterobacter sp.* Diseases caused by bacteria can be treated with the use of antibiotics. In Indonesia, there are many types of plants that have antibacterial properties, one of which is chitolod. Kitolides are known to have secondary metabolite compounds that function as antibacterials (Aprilia) *et al.*, 2022).). In a book written by Iskandar Ali in 2003, entitled The Efficacy of Kitalod to Conquer Eye Disorders, it is explained that traditionally, people have long used this plant to treat eye problems such as cataracts, nearsightedness, and overcome blindness due to glaucoma. This is due to the content of bioactive alkaloid compounds in chitolod, such as lobelin, lobelamine and isotomine, chitolod leaves are thought to contain alkaloids that may increase the production of fluid in the eye (Siska *et al.*, 2016).

Kitolod Plant (*Isotoma longiflora* L.) can also be used as an alternative to antibacterial because of the alkaloid and flavonoid content contained in it and even has anti-inflammatory, antioxidant, anticancer, antidiabetic, antimicrobial and other effects (Cendani *et al.*, 2025). Based on the literature search conducted by the researcher, there are several previous studies on the use of kitalod flowers as a traditional medicine for the eyes, one of which is in the study (Scott, 2022) who conducted research on Sumbergirang Village showed that the people of Sumbergirang Village used kitalod flowers to treat eye problems such as irritation, redness and cataracts based on oral inherited knowledge and information from the closest people. Based on this background, the researcher is interested in conducting research on the use of kitalod flowers as a traditional medicine for the eyes, where this research will be carried out in Lasalimu Village.

METHOD

This study is an observational study that is descriptive and does not involve experiments. Descriptive means to provide an objective picture or reality of the conditions that exist in a group or community. This study uses a survey method to collect information by asking questions to respondents. This research will be carried out in Lasalimu Village in June 2025.

Population and Sample

The population of this study consists of 1879 people living in Lasalimu Village.

Sampling and Sampling Techniques

The sample for this study will be determined using the Slovin formula. The Slovin formula is as follows:

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

Information:

n = Sample Size

N = Population

d = The error or precision rate set in this study is 10%.

For sampling, the method used is *purposive sampling*, which is based on special characteristics. The criteria for sampling are as follows:

- a. Age between 18 to 65 years old
- b. Able to communicate, read, and write
- c. Willing to be a respondent
- d. Have you ever heard of or know of kitalod leaves

Data Collection Techniques

Data collection techniques are the process of collecting information, one of which is using test instruments. The test instrument is a method that is carried out by giving a number of questions to the informant. The questions will be submitted through the distribution of questionnaires directly to the community in Lasalimu village without intermediaries.

Data Analysis

The assessment of the knowledge of the people of Lasalimu Village about the use of kitalod flowers as a traditional eye medicine was measured by providing questions in the format of test instruments. This study uses the Guttman scale. The Guttman scale is a scale that provides two answer choices, for example—no, good—bad, never—never and others.

Answer Yes : point 1

Answer No : point 0

The data is processed using a formula to find out the percentage. The formula is as follows:

$$P = \times 100\% \frac{X}{N}$$

Information:

P : Percentage

X : Number of correct answers

N : Number of question items

The collected data is categorized according to the ordinal scale, paying attention to the correct answers with the following conditions:

- a. Score 80-100 correct answer: Good Knowledge
- b. Score 50-79 correct answer: Sufficient Knowledge
- c. Score ≤ 49 correct answer: Low Knowledge

RESULTS & DISCUSSION

This research was carried out in Lasalimu Village, South Lasalimu District, Buton Regency Lasalimu Village is one of the villages with the largest population in Buton Regency, with a population of 2,824 people, divided from 1,465 males and 1,359 females.

Based on research that has been carried out through the questionnaire method given to the community in Lasalimu Village, the number of respondents who met the criteria and participated in this study was 95 people who filled out the questionnaire. This research focuses on public understanding of the use of kitalod flowers as a traditional treatment for reddish eyes. By using questionnaires, researchers can obtain precise and important data about the public's understanding of the use of kitalod flowers.

Table 4.1 Characteristics of respondents

Yes	Characteristic	Frequency (people)	Percentage
1.	Gender		
	Man	51	53,68 %
	Woman	44	46,32 %
	Total		100 %
2.	Age		
	18-25	34	35,79%
	26-35	22	23,16 %
	36-45	14	14,74%
	46-55	11	11,58%
	56-65	14	14,74%
	Total		100%
3.	Final Education		
	SD	15	15,79%

	Junior High School / Equivalent	29	30,53%
	High School/ Equivalent	36	37,89%
	College	15	15,79%
	Total		100%
4.	Drug Use		
	Traditional		
	Ever	78	82,11%
	Never	17	17,89%
	Total		100%

Source: Primary Data 2025

Data on the characteristics of the research subjects showed that out of 95 people who wanted to fill out the questionnaire, there were 44 female respondents with a percentage (46.32%) and 51 male respondents with a percentage (53.68%) and it is known that the most respondent age data was at the age of 18-25 years as many as 34 respondents with a percentage (35.79%) and based on the data obtained that the most respondents' education was in high school/equivalent as many as 36 respondents with a percentage (37.89%). Based on the results of research that has been carried out related to the use of traditional medicine in the community of Lasalimu Village, South Lasalimu District, it shows that as many as 78 respondents with a percentage (82.11%) have used the kitalod plant as a traditional medicine for the eyes.

Table 4.2 Respondents' knowledge of traditional medicine can be viewed by gender, age, last education						
No.	Characteristic	Category			(n)	Total
		Low	Enough	Good		
1.	Gender					
	Man	8 (15,7%)	20 (39,2%)	23 (45,1%)	51	100
	Woman	5 (11,36%)	21(47,73%)	18(40,91%)	44	100
2.	Age					
	18-25	7 (20,6%)	14 (41,2%)	13 (38,2%)	34	100
	26-35	2 (9,1%)	10 (45,5%)	10 (45,5%)	22	100
	36-45	5 (35,7%)	6 (42,9%)	3 (21,4%)	14	100
	46-55	0	8 (57,1%)	6 (42,9%)	14	100
	56-65	1 (7,14%)	5 (35,71%)	8(57,14%)	14	100
3.	Final Education					
	SD	3 (20%)	3 (20%)	9 (60%)	15	100
	Junior High School / Equivalent	5 (17,2%)	11 (37,9%)	13 (44,8%)	29	100
	High School/ Equivalent	3 (8,3%)	22 (61,1%)	11 (30,6%)	36	100
	College	4(26,67%)	6(40%)	5 (33,33)	15	100

Source: Primary Data 2025

Based on table 4.2, data was obtained that from 95 respondents, the largest percentage of respondents' knowledge in the age category was obtained in the age category of 18-25 years old with sufficient knowledge (41.2%), in the gender category the largest percentage of the male gender with good knowledge (45.1%), the largest percentage was found in respondents with the last education of high school / equivalent with good knowledge (30.6%).

Table 4.3 Respondent Knowledge Categories			
Yes	Category	Sum	Percentage
1.	Enough	43	45,26 %
2.	Good	38	40 %
3.	Low	14	14,74%
	Total	95	100 %

Source: Primary Data 2025

Based on table 4.3, the level of knowledge of respondents with the sufficient category was 43 respondents (45.26%), the knowledge of the good category was 38 respondents (40%), and the least knowledge of the low category was 14 respondents (14.74%).

The knowledge of the people of Lasalimu village about the use of kitalod flowers (*Isotoma longiflora* L.) as a traditional medicine for red eyes is in the sufficient category, showing that the knowledge of the people of Lasalimu Village is at the two lowest levels, namely *Know* and *Comprehension*. The people in the village know that kitalod flowers can treat red eyes and they also understand how to use them in general, such as dripping sap. However, their level of knowledge does not reach a higher level such as the ability to analyze risks, apply more sterile methods, or critically evaluate the effectiveness and harms of such treatments.

The level of knowledge that is in the "adequate" category can be influenced by several factors. First, there are hereditary traditions that are still preserved in Lasalimu Village. Knowledge about the properties of kitalod flowers is most likely passed on from parents or village elders to the younger generation, so that basic information about this plant is maintained. Second, access to adequate information, such as interaction with fellow citizens, allows the community to acquire and share knowledge. While the information may not always be scientifically accurate, it at least provides a preliminary understanding of the use of kitalod flowers. Third, personal experiences or the experiences of those closest to them who use kitalod flowers and feel that they have benefited also play a role in shaping people's beliefs and knowledge.

"Sufficient" knowledge indicates that there is a good foundation to improve. Even though people already have an initial understanding, they are still vulnerable to inappropriate and risky practices. Therefore, it is important to do further education. Information also needs to be emphasized about when traditional medicine is no longer effective and when it is time to seek professional medical help, for example if symptoms do not improve or worsen. Thus, public knowledge can be increased from just "enough" to "good," so that the use of kitalod flowers can be done more safely.

Based on the data on the distribution of respondents' answers, it can be seen that in the category of knowledge about potential side effects or risks of using kitalod for the eyes in question 9 (Do you

know the potential side effects or risks of using kitalod for the eyes), there were 84 respondents who chose the answer "no". This shows that the majority of respondents are unaware of the potential side effects or risks of using kitalod for the eyes. The lack of knowledge about these side effects can be attributed to the lack of knowledge that traditional medicine can have side effects, even though it is considered safe and natural. This is in line with research conducted by those who say that people still consider traditional medicine safe in its use, so that people do not find out much about the side effects of traditional medicine. This assumption can cause people to be unaware of the potential side effects that may arise from the use of kitalod as a traditional medicine.

Keep in mind that although our plant can help with mild eye problems, its use should be done with extreme caution and follow strict hygiene standards. Using traditional medicine directly for the eyes is not recommended because the eyes need sterile materials to avoid possible infections. The way of cleaning kitalod plants that is usually done by the community does not guarantee the cleanliness needed, so it is necessary to take stricter preventive measures to be safe when using herbal medicines as eye drops. Improper use of eye drops can result in serious health problems.

Eye drops used in the wrong way can make the disease incurable or even worsen the condition of the eye, which can lead to irritation, more severe infections, nerve damage to the eye, and other symptoms of eye problems. Therefore, it is important to use eye drops correctly and follow the instructions to avoid unwanted risks.

COVER

Based on the research that has been conducted, it is concluded that the knowledge of the people in Lasalimu Village regarding the use of chitolod flower (*Isotoma longiflora* L.) as a traditional medicine for reddish eyes is quite sufficient. This shows that, although people have a good basic understanding of its benefits and how to use them, their knowledge is still limited to general things only. The people of Lasalimu Village do not fully know the right dosage, the importance of sterilization, and the possible risks and side effects that can arise from incorrect use.

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