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Potential Health Benefits of Selayar Orange Peel (*Citrus Nobilis Loureiro*) in Selayar Society Perspective

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Abstract

Objectivity: This study aimed to examine the health benefits of orange peels from the perspective of the general public.

Methods: This study involved the Selayar Society in the Batangmatasapo area. The data used seven informants and literature sources of the health benefit orange peels. Analyze data using Excel Office.

Results: This study describes some of the benefits of Selayar orange peel that have used in alternative medicine on the Selayar Islands in the form of anti-obesity, antipyretic, anti-inflammatory, and as an analgesic.

Conclusion: Selayar orange peel has health benefits in the form of anti-obesity, antipyretic, anti-inflammatory, and analgesic. These results are still in the form of discourse that in the future, will be developed in further research in the form of an observational study on the content of Selayar orange peel as alternative medicine.

Keywords: Selayar Orange Peel, Selayar Society, *Citrus Nobilis Loureiro*.

Introduction

Selayar orange peel as a leading commodity known has health benefits. BatangmataSapo is the largest Orange producing area in the Selayar Islands Regency. This area has a population density of around 13,248 people, which is 9.77% of the total population of Selayar Islands Regency in 2019. The superior fruit production of Selayar Islands Regency in the form of Selayar Oranges is 31,843 quintals in 2019.¹ As a leading commodity with a large production, Selayar orange peel is an abundant material in nature but becomes only a lot of industrial and domestic waste without further processing.

This study aimed to examine the health benefits of Selayar orange peels from the perspective of the Selayar community, as additional study material for the

utilization of citrus peel waste as alternative medicine in the future.

Methods

The informants of this research are residents who consume Selayar Orange Peels and live in the BatangmataSapo Village, Bontomatene District, Selayar Islands Regency. For the fulfilment of the sample in a qualitative approach with in-depth interviews in this study using two key informants and five informants.

The general data of the informants are in the form of basic characteristics consisting of age, gender, educational status, employment status, marital status and the habit of consuming orange peels. In-depth-Interviews conducted with two key informants and five additional informants. Interviews using the interview concept alone, not in groups using interview guidelines that had prepared previously. This interview covered the knowledge, attitudes, and behaviour of the informants on the use and utilization of orange peel.

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The data processing process includes participant observation, documentation, and in-depth interviews. After the data is collected, we will carry out a data analysis process, for qualitative data analysis of data in the form of Data Reduction, Display, and Verification with words in the results of the core interview, calculating the number of words and the meaning of words in the local language.

Results

Figure 1 is the result of our interview based on the Variables of Knowledge, Attitude, and Behavior of the Selayar Community on the Use of Selayar Orange Peels. The following picture groups of words are words that have a frequency of more than three times, appearing at the time of the in-depth interview.

Figure 1 shows the results of the Word Cloud data query analysis to show the words that appear most frequently in in-depth interviews with the presentation of the results that we have adjusted as table 1.

Table 1. Words Frequent in-depth-interview of Selayar Orange Peels

No.	Words	Frekuensi	%
1.	Orange	22	2,76
2.	Peel	20	2,42
3.	Powder	8	1,01
4.	Drugs	7	0,88
5.	Illnes	6	0,75

Source : Data Primer, 2020

Qualitative Data, Analysis Query data

Three hundred forty words that we have selected based on the results of interviews with informants who have the highest frequency of occurrence and are the core words of the research. Based on Table 1, the words that appear most often are the talks «Orange and peel» aimed at Selayar Oranges which are the topic of discussion. For the term «Powder and Medicine» indicate the process of using Selayar orange peels used in the treatment process.

And the Word «Garring»(Illness) denotes to treat a particular disease described for the Word «garring». Meanwhile, the use of weight loss appeared in two informants who had heard of and used orange peel as a diet ingredient.

“Orange peel can also improve my body shape”.
(Informant 7)

Informant 7 said that using orange peel selayar for weight loss.

“I eat orange peel for my body because my grandmother also ate it and was in good shape and never got sick” (Informant 2)

Informant 2 said that the reason for consuming orange peel is always to lose weight and because her grandmother also consumes orange peel with the result that she is never overweight and rarely sick. The key to Emik’s view on the use of orange peel as an anti-obesity ingredient.

Figure 1 and Table 1 show that each informant knows Selayar orange peel, which was once an alternative medicine to treat health problems. Although after further investigation, the informants could not explain specifically about the types of diseases that generally treated using orange peel.

The use of orange peel based on the results of interviews, dried and mashed until it is relatively smooth then drunk as medicine for the patient, another presentation is to mix the orange peel liquid with warm tea and then consume.

How to present skin as wide as according to several informants,

“Never heard, it is made in powder form and then mixed with water to drink to the patient, the orange peel is dried and then mashed until it becomes a powder”.
(Informant 1)

“Never heard, it is made into powder and mixed with water, which was previously dried and powdered.”
(Informant 4)

Informants 1 and 4 said that the presentation of orange peel in the form of crushed orange peel powder

after previously drying it first, then giving it to the patient with plain water.

Selayar people's knowledge about the consumption of orange peel is only limited to historical experience in a few families, which is local wisdom taught by previous parents. However, in general, people today do not consume orange peels as such:

"My grandmother used to eat this orange peel, but I didn't see it right away because my grandmother was dead, but when I was sick, I drank this orange peel as a medicine substitute" (Informant 3)

"Because we still believe in traditional medicine rather than synthetic drugs. If we are sick, take him to Sanro because the hospital is far away, because he believes in the properties of traditional medicine such as orange peel" (Informant 6)

Informant 3 and informant 6 stated that consuming orange peel as per the custom of previous parents by using it as herbal medicine as a substitute for chemical therapy because the conditions led the public to trust the dukun's treatment with herbal medicine more. However, this habit is no longer common today.

The researcher's view of the use of orange peel is a tradition that has existed in society, only that it has been eroded by the development of civilization and the entry of various facilities so that its generations almost wholly abandon the culture. The local wisdom of the local community regarding the use of Selayar orange peel as anti-obesity can be the key to reducing obesity problems that arise in the Selayar society itself.

Based on the results of the In-depth Interview, the researchers concluded that historically Selayar orange peel had been one of the herbal medicines to treat health problems.

Discussions

Public knowledge, in general, consumption of oranges is consuming pulp and peels, which is discarded and becomes household waste. This research is a phenomenological study to explore the habits of specific communities in the area of BatangmataSapoSubdistrict, Bontomatene District, Selayar Regency regarding

consuming Selayar orange peels in the community.

The existence of herbal raw materials in Indonesia which come from nature is so abundant. Indonesia is the second country in the world after Brazil, which has abundant biodiversity. Therefore, it is unfortunate if Indonesia's natural resources not used for herbal medicine in the community.

Besides, based on existing facts, various efforts have been made by multiple socio-cultural groups to maintain and improve their health in the natural resources that exist in their vicinity. The ancestors in ancient times also had a long and hereditary experience in selecting various biological resources around them, which they considered and believed to be beneficial for health improvement and disease therapy.

The community satisfaction survey conducted by BPOM shows that around 50% of the people buy medicine and food carefully. Three Community empowerment efforts need to be made so that people are smart and responsible in choosing medicines and food so that the circulation of drugs and unsafe foods can be suppressed. A data-based communication strategy regarding the community situation, namely the knowledge, attitudes and behaviour of the community in selecting safe, useful and quality drugs needs to be designed to produce excellent and comprehensive communication, education so that the goal of community empowerment is achieved.²

Green since 1974 stated that a person's behaviour is influenced by three factors, namely predisposition factors, supporting elements and driving factors. Predisposing factors include knowledge, attitudes, beliefs, values, and so on. Supporting factors are the availability and easy access to safe and quality drugs. The driving factor is advice from family, relatives and friends, advertisements and government regulations. Several studies stated that the factors that influence consumers in choosing drugs are location, information from pharmacy staff, and promotions.³

The habit of consuming orange peels in the community is good for helping community health development by utilizing local herbs. Although in practice for today's conditions, this habit is infrequent.⁴

Based on the results of a qualitative study, the researchers found that the use of citrus peels as traditional medicine was known to treat several diseases which were probably due to the lack of access to health services for the community. However, historically the use of orange peel as a herbal plant provides a quick answer about one of the alternative treatments that have used in the Selayar Islands Regency.

The presentation that usually done for treatment with Selayar orange peel is to squeeze the orange peel and then squeeze it until the water comes out, which tastes bitter, which believed to be a medicine. Some also serve it by drying the orange peel, then mashing it so that it is smooth enough to be mixed with water and consume it like powder.

Although previously the efficacy of orange peel appeared empirically in several treatment trials, this has not been followed until now, because the development of the regional progress of the Selayar Islands district for the mainland area has sufficiently provided health service needs. And there are many other alternatives to seek treatment.

Analgasic and antipyretic activity are the properties of hesperidin. Hesperidin is known to found in orange peels commonly. Hesperidin has shown analgesic activity in mice by subcutaneous administration. This effect has described as being exerted via a device and not a central mechanism.⁵ It also showed analgesic activity in mice after intraperitoneal administration. Besides, hesperidin reduced fever caused by yeast in mice. This effect may be related to the yeast-induced inhibition of prostaglandin biosynthesis. Hesperidin is known to inhibit the release of histamine and prostaglandins, thereby acting as a defensive gastric factor and preventing acid secretion and gastric mucosal lesions.⁶

Antibacterial. In a study involving investigating the anti-*Helicobacter pylori* (HP) activity, in vitro, of several flavonoids and their metabolites, hesperetin and other flavonoids were found to inhibit HP growth.⁷ In patients with chronic gastritis, HP promotes the change from gastritis to gastric cancer.⁸ However, The Study has recently shown hesperidin to be in vitro on agar plates, against *Bacillus subtilis*, *Staphylococcus aureus*,

Streptococcus hemolytic, *Escherichia coli*, *Klebsiella species*, *Pseudomonas aeruginosa*, *Salmonella typhi*, *Shigella dysentery*, *Vibrio Cholera*.^{6,9} Effect on wound healing. Recently a micron flavonoid fraction, consisting of 90% diosmin and 10% hesperidin, was tested for its impact on clean wounds and those infected with *S. aureus* on oral and topical administration. This study demonstrated that while there was no significant effect on clean wounds, the combination has a beneficial impact on infected wounds when administered orally and topically.^{10,11}

Immuno-modulation activity. It has reported that hesperidin has immuno-suppressive activity. This suppresses the production of bacterial alpha-amylase antibodies in mice by intragastric administration at a dose of 50 mg/kg. In another study, intragastric administration of 50 mg/kg hesperidin to male mice significantly improved immunological memory development in the cellular immune response.^{12,13,14}

Therefore, according to a qualitative study of orange peel, historically as alternative medicine, it is answered, because some of its pharmacological effects are indeed fulfilling to be herbal ingredients that can relieve several types of symptoms of minor ailments.

Conclusion

Selayar orange peel has health benefits in the form of anti-obesity, antipyretic, anti-inflammatory, and analgesic. These results are still in the form of discourse that in the future, will be developed in further research in the form of an observational study on the content of Selayar orange peel as alternative medicine.

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