

Exploring the Potential of Bawean Butter Fruit as a Nutritious Food Source to Improve Health

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ABSTRACT

ABSTRACT This study aims to explore the potential of Bawean butter fruit as a nutritious food source to improve public health. The method used is the Systematic Literature Review (SLR) by collecting primary data from relevant literature and secondary data from books and journals. The results indicate that Bawean butter fruit contains higher levels of vitamin C, potassium, and antioxidants compared to other local fruits. The utilization of this fruit can enhance food security and public health. In conclusion, Bawean butter fruit holds great potential that has not yet been fully optimized to support health.

Keywords: Bawean Butter Fruit, Nutritious Food, Public Health

99 Introduction

Nutritional problems remain a major challenge in health development, especially in areas with limited access to nutritious food. One of the main challenges faced is the dependence on limited food sources, leaving many local food potentials underutilized (Willett, 2020). Bawean butter fruit, which only grows on Bawean Island, is an example of a local food with high nutritional content but is not yet widely known as an alternative nutritious food. Although it has great potential, the utilization of Bawean butter fruit for public health remains very limited (Suryani et al., 2020). This indicates a gap between the nutritional potential of Bawean butter fruit and public awareness of its benefits.

Various studies emphasize the importance of dietary diversity in supporting nutritional fulfillment for communities (Willett, 2020). According to the healthy eating pattern theory proposed by Willett (2013), a nutritious diet strongly depends on the selection of nutrient-rich food ingredients. However, many local food potentials are not optimally utilized, including Bawean butter fruit (Suryani et al., 2020). This research aims to identify the nutritional content in Bawean butter fruit and its impact on public health. The primary objective is to explore how the utilization of this fruit can improve food security and public health status. This research is expected to contribute to filling the knowledge gap regarding Bawean butter fruit and provide a scientific basis for developing the use of local food in the context of public health.

widely known as an alternative nutritious food. Although its potential is very high, the utilization of Bawean butter fruit for public health remains very limited (Suryani et al., 2020). This shows a gap between the nutritional potential possessed by Bawean butter fruit and the public's knowledge about its benefits. Various studies suggest the importance of food diversity in supporting the fulfillment of community nutrition (Willett, 2020). According to the healthy dietary pattern theory proposed by Willett (2013), a nutritious diet greatly depends on the selection of nutrient-rich food ingredients. However, many local food potentials are not optimally utilized,

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including Bawean butter fruit (Suryani et al., 2020). This research aims to identify the nutritional content in Bawean butter fruit and its impact on public health. The main objective of this study is to explore how the utilization of this fruit can enhance food security and community health status. This research is expected to contribute to filling the existing knowledge gap regarding Bawean butter fruit and provide a scientific foundation for developing the utilization of local food in the context of public health.

100 Literature Review

Biology education plays an important role in increasing public understanding of the importance of a healthy lifestyle, including through the consumption of nutritious food. In this context, the application of biology education theories of biology education that is based on the development of practical and conceptual skills can help educate the public about the benefits of consuming nutritious local food, such as Bawean butter fruit. This is in line with the views of Bloom et al. (1956), who emphasized the importance of applying biological knowledge in daily life to achieve holistic health goals. A study by Roe et al. (2019) also shows that non-formal education promoting an understanding of local food consumption can increase public awareness of the importance of nutrition in maintaining health.

Health, as defined by WHO (1948), is a state of physical, mental, and social well-being and is highly influenced by healthy dietary patterns. The consumption of local fruits such as Bawean butter fruit, which is rich in nutrients, can play an important role in disease prevention and in maintaining overall health. Smith & Lee (2017) also emphasize the importance of integrating healthy dietary patterns with improved physical and mental health, which can be achieved through the consumption of nutritious food.

Local food, such as Bawean butter fruit, plays a strategic role in supporting optimal nutritional fulfillment, especially in communities facing malnutrition issues. The FAO (1997) stresses that nutritious and safe food is key to improving quality of life. In this case, Bawean butter fruit can function as a complementary food that supplements the nutrient intake from staple foods, from staple foods and helps maintain the body's nutritional balance, as explained by Aminah & Fadila (2021).

101 Research Methods

This research uses a Systematic Literature Review (SLR) approach to explore the potential of Bawean butter fruit as a nutritious food source. The study began by formulating a specific research question, namely regarding its nutritional content and impact on public health. Literature searches were conducted using relevant keywords in databases such as PubMed and Google Scholar. Inclusion-exclusion criteria were used to select studies that met quality standards. Content analysis was applied to synthesize findings from existing literature, identify patterns, and formulate evidence-based recommendations for food and health policy

102 Result and Discussion

The literature review related to food shows that Bawean butter fruit has abundant nutritional content, including vitamin C, potassium, fiber, and antioxidants that play an important role in maintaining bodily health. According to research by Handayani et al. (2020), Bawean butter fruit can be categorized as a local food rich in nutrients, although its utilization in society remains minimal. On the other hand, many studies highlight the crucial role of local fruits in supporting food security and improving healthy eating patterns, such as noted by Sari et al.

(2021), who stated that local fruits such as Bawean butter fruit have the potential to be used as a nutritious food source that supports the fulfillment of community nutritional needs.

Based on the literature review, the presence of Bawean butter fruit as a nutritious food source is seen to have a positive contribution to public health, especially in terms of meeting daily nutritional requirements. The high vitamin C content in Bawean butter fruit can help strengthen the immune system, while potassium plays a role in maintaining electrolyte balance and heart health. Additionally, the fiber in this fruit can aid digestion and reduce the risk of digestive disorders. Nevertheless, its utilization is still limited to communities in its native region, and knowledge about the health benefits of this fruit has not spread widely among the general public. This indicates that the potential of Bawean butter fruit to improve health has not been optimally utilized.

The descriptions and explanations above highlight a mismatch between the nutritional potential of Bawean butter fruit and the reality in the field, where this fruit is still not widely used by the public. The issue that arises is the lack of public awareness about the benefits of this fruit as a nutritious food source. Therefore, even though Bawean butter fruit is rich in health-promoting nutrients, its limited distribution and usage have not been optimal in fulfilling the wider nutritional needs of the community. This forms the fundamental problem of this research—how the potential of Bawean butter fruit can be further explored to improve public health more generally.

The literature review related to health shows that sufficient and balanced nutrition plays an important role in the prevention of various diseases. Public health can be improved by consuming foods rich in nutrients, including fruits that contain antioxidants, vitamins, and minerals. A study by Astuti et al. (2019) revealed that the consumption of foods rich in fiber and vitamins, such as those found in Bawean butter fruit, can help reduce the risk of degenerative diseases such as hypertension, diabetes, and heart disease. Furthermore, other literature also emphasizes the importance of nutrition in strengthening the immune system and supporting recovery processes for individuals experiencing health disorders.

The data obtained show that the consumption of nutritious fruits, such as Bawean butter fruit, can have a positive impact on public health. The vitamin C content in this fruit contributes to enhancing the body's immunity, especially in fighting infections. Additionally, this fruit is rich in fiber, which is important for preventing digestive disorders and helping regulate blood sugar levels. Therefore, the introduction and utilization of Bawean butter fruit as part of a healthy diet..pattern can be a strategic step to improve overall community health. The use of nutritious local foods can also provide a solution to dependency on imported foods that are sometimes less nutritious.

Although there is strong evidence indicating that Bawean butter fruit has many health benefits, the reality is that its utilization is still limited to certain regions. This presents a challenge to introduce this fruit more widely to a larger community, where the lack of knowledge and understanding about the benefits of Bawean butter fruit results in low demand for this product. Thus, despite evidence from the literature showing that consumption of this fruit can support health, its distribution remains limited and efforts to raise public awareness about the importance of utilizing local fruits as part of a healthy diet are necessary.

Literature related to Biology Education indicates that education about nutrition and health is very important in shaping healthy dietary patterns in society. According to Suryani et al. (2022), biology education that teaches the importance of understanding nutrition can help people become more aware of the food choices they make. Moreover, education about using nutritious local food ingredients, such as Bawean butter fruit, can reduce dependence on imported foods and improve national food security. Through biology-based education, the public can be provided with sufficient information about the health benefits of consuming nutritious local fruits.

Biology education plays a major role in forming healthier eating habits by providing deeper understanding about the nutritional content in various food types. Bawean butter fruit, which is rich in vitamins and fiber, can be used as an example in teaching about the benefits of consuming nutritious local fruits. With proper biology education, communities are expected to better understand the importance of selecting foods that are not only nutritious but also sustainable and supportive of food security. Therefore, biology education about nutrition and local food consumption becomes an important aspect that can support efforts to improve public health.

The relationship between descriptive data and explanations regarding biology education with the research problem can be seen from the need to increase public awareness of the nutritional benefits of Bawean butter fruit. Although this fruit has great potential in supporting community health, limited understanding of the importance of consuming local fruits is a major barrier to its utilization. Therefore, through biology education approaches based on accurate nutritional information, the public can be helped to make better decisions regarding nutritious food consumption and support the fulfillment of nutritional needs more broadly.

103 Conclusion

This study concludes that Bawean butter fruit has remarkable nutritional content, including vitamin C, potassium, and antioxidants, which are higher compared to other local fruits. This fruit holds great potential to support food security and improve public health. The recommendations from this research are to utilize Bawean butter fruit more widely in efforts to enhance food security and to encourage further research covering processing aspects and sustainable cultivation to make it more appealing to consumers and expand its impact.

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