



Health Education and Cooking Demonstration of Skipjack Tuna Nuggets as a Healthy Snack Alternative for Hypertension Prevention in Boneoge Village

Ahmil¹, Fitria wahyu Ningrum Matasa², Maydinar Ziadah,³ Jingga Fitria Maila⁴, Misna⁵, Novia⁶, Mayumi⁷, Mutiara⁸, Ni wayan ulantari⁹, Sakina¹⁰

^{1,2,3,4,5,6,7,8,9,10} Universitas Widya Nusantara

✉ Ahmil@uwn.ac.id

ARTICLE INFO

Article history

Received : 31-8-2025

Revised : 18-3-2026

Accepted : 18-3-2026

Keywords

*Health Education,
Cooking Demonstration,
Tuna Nuggets, Healthy
Snack, Boneoge Village*

ABSTRACT

Hypertension is a major public health problem whose prevalence continues to increase worldwide. According to the World Health Organization (WHO, 2023), more than 1.28 billion adults live with hypertension, with the majority residing in developing countries. In Boneoge Village, community members still tend to consume foods high in salt and fat, while the potential of local food resources such as skipjack tuna has not been optimally utilized. In fact, skipjack tuna is rich in protein, omega-3 fatty acids, and various micronutrients that are beneficial for cardiovascular health. This community service program aimed to increase community knowledge about hypertension and promote healthy snack alternatives by utilizing local food resources. The program was implemented through health education and a cooking demonstration of skipjack tuna nuggets using a participatory approach with a pre-test and post-test design. A total of 15 residents from RT 10 Boneoge Village participated in the activity held on August 19, 2025. The results showed an increase in participants' knowledge regarding hypertension prevention and healthy dietary practices, as well as improved skills in processing skipjack tuna into nutritious snack products. Therefore, this program contributed to increasing community awareness, improving practical skills, and encouraging the utilization of local food resources as part of hypertension prevention efforts.





A. INTRODUCTION

According to the World Health Organization (WHO), hypertension, or high blood pressure, occurs when the pressure in the blood vessels exceeds the normal limit, namely more than 140/90 mmHg. This condition is often considered trivial, but it can have serious consequences if not treated promptly. People with hypertension often experience no specific symptoms, so the most definitive way to determine their condition is by measuring their blood pressure. According to WHO data, an estimated 1.28 billion adults aged 30–79 worldwide have hypertension, and the majority (about two-thirds) live in low- to middle-income countries. Furthermore, approximately 46% of adults with high blood pressure are not even aware they have the condition (WHO, 2023).

In neighborhood unit 10 of Boneoge Village, most residents still consume high-salt, oily, and instant foods as daily snacks. This area boasts abundant local resources, including tuna. However, tuna's utilization as a healthy food ingredient is still under-optimal. Lack of nutritional knowledge and skills in preparing healthy foods mean that residents lack a variety of snacks suitable for people with hypertension.

Tuna is a type of fish that is rich in nutrients due to its protein, omega-3 fatty acids, and micronutrients. Tuna is also rich in vitamin B12, selenium, niacin, phosphorus, magnesium, riboflavin, vitamin B6, potassium, thiamine, pantothenic acid, iron, copper, and vitamin A. Therefore, the benefits of tuna are very good for health. Tuna is known for its ability to improve heart health and reduce blood pressure. A study published by Atherosclerosis states that regular consumption of tuna will significantly lower blood pressure.

Nuggets are generally made from chicken. However, with the passage of time, people have been able to process nuggets with various ingredients, from beef to fish. One fish that can be processed into nuggets is tuna. Tuna productivity has increased. According to 2023 data from the Central Statistics Agency, tuna production in Central Sulawesi reached 74,941 tons.

A previous study, titled "Catfish Nugget Making Training in Hypertension Prevention Efforts in the Kunden Village Community," demonstrated that a community-based nutrition intervention approach was effective in improving understanding and skills. The study used counseling and cooking demonstrations aimed at providing knowledge about hypertension and how to prevent it through healthy eating. The results showed that the community in Kunden Village successfully acquired new knowledge about hypertension and how to manage it through a healthy diet. Furthermore, they also gained practical skills in preparing catfish nuggets as a nutritious snack alternative. These findings reinforce the idea that education and practical training on local food processing can be an effective strategy in controlling hypertension at the community level. These results are highly relevant to our efforts in Boneoge Village, where we focus on utilizing tuna as a local food source beneficial for people with hypertension.

In response to this situation, health education and demonstrations on making tuna nuggets as a healthy snack alternative are proposed. This activity aims to increase public understanding of healthy eating patterns, develop skills in processing tuna nuggets, and support efforts to control hypertension through the use of local foods.



The objectives of this activity include:

1. Providing public understanding about hypertension and healthy eating patterns.
2. Training the community in processing tuna nuggets as a healthy alternative snack.
3. Supporting hypertension control efforts through the use of local foods based on nutritional interventions.

B. METHODS

This activity included health education and a cooking demonstration using tuna as the main ingredient. The activity took place in the yard of the Posko Group 24, RT 10, Boneoge Village, on August 19, 2025, with 15 participants. It was held offline at 10:00 a.m. WITA.

This activity implemented a participatory education approach combined with a pre-test and post-test design. The pre-test was conducted before the health education session to assess participants' initial knowledge about hypertension and healthy dietary practices. After the education session and cooking demonstration, a post-test was conducted to evaluate the improvement in participants' understanding.

The program activities include:

- a. Opening and introduction, explaining the purpose of the activity and the importance of a healthy diet in controlling hypertension.
- b. Health education on hypertension, risk factors, symptoms, and the role of a healthy diet, delivered interactively using leaflets.
- c. Live cooking demonstration of tuna nuggets, actively involving participants.
- d. Discussion and Q&A session, giving participants the opportunity to ask questions related to nutrition and healthy food preparation.
- e. Door prizes for participants who can answer questions related to hypertension and during the cooking practice.
- f. Evaluation and closing - a brief evaluation through questions and answers to gauge participant understanding.

C. RESULTS AND DISCUSSION

1. Community Engagement Activities

This community service (KKN) was held on August 19, 2025, in the courtyard of the Group 24 Post, RT 10, Boneoge Village. The program involved 15 participants consisting of residents who were at risk of hypertension and those who had previously been diagnosed with the condition. The activity began with an opening session, introduction of the implementation team, and explanation of the objectives of the program. Participants showed high enthusiasm during the activity, as indicated by their punctual attendance and active participation throughout the program.

2. Health Education

During the health education session, participants received information regarding hypertension, including its definition, risk factors, symptoms, and prevention strategies through healthy dietary patterns. The educational material was delivered interactively using leaflets and simple explanations so that the participants could easily understand



the information. Based on the evaluation conducted through interactive questions and discussions, participants demonstrated improved understanding of hypertension and the importance of maintaining a healthy diet. Many participants also became aware that frequent consumption of foods high in salt, oil, and saturated fat can increase the risk of hypertension.

These findings are consistent with previous studies showing that health education interventions can effectively improve community knowledge regarding hypertension prevention and encourage healthier lifestyle practices (Susanti et al., 2024). Increased awareness through education is considered an important strategy for reducing risk factors associated with hypertension in the community.

3. Tuna Fish Nugget Cooking Demonstration

After the training session, the activity continued with a hands-on demonstration of making tuna fish nuggets. Participants were actively involved in each stage of the preparation process, including preparing the ingredients, mixing the dough, shaping the nuggets, and cooking them using healthier methods with minimal oil. The demonstration aimed to provide practical skills to the participants so they could apply the knowledge at home. Based on participant feedback during the discussion session, many residents expressed increased confidence in preparing tuna nuggets independently. This is particularly important considering that skipjack tuna is one of the abundant local food resources in Boneoge Village but has not been widely utilized as a healthy food product. Similar findings were reported in a community training program on the preparation of fish-based nuggets, which demonstrated that cooking demonstrations can improve community skills in processing local food into healthier products (Prasdiantika and Nugroho, 2023)

4. Impact and Benefits of the Activity

The activity provided several benefits. First, the program increased participants knowledge about hypertension and the importance of maintaining a healthy diet. Second, participants gained practical skills in processing skipjack tuna into nuggets as a nutritious and affordable snack option. Third, the activity encouraged the community to utilize locally available food resources in a more creative and health-oriented way. Fish-based nuggets are considered a nutritious food alternative because fish contains high-quality protein and beneficial nutrients that support overall health (Rahmawati, 2024). Therefore, the use of local fish resources such as skipjack tuna can contribute not only to improving dietary quality but also to supporting community-based strategies for hypertension prevention.



Picture 1. Hypertension-Related Counseling Activities



Picture 2. Demonstration activity of making skipjack tuna nuggets



Picture 3. Door Prize Distribution Activity



Picture 4. Leaflet



D. CONCLUSION

The health education program and practical training on making tuna nuggets in Neighborhood Association (RT) 10, Boneoge Village, was well-implemented and received positively by residents. This activity successfully increased public understanding of hypertension and the importance of maintaining a healthy diet. Furthermore, residents also gained hands-on skills in processing tuna into nuggets, a healthy snack that has the potential to reduce the risk of hypertension. Utilizing local food sources not only provides health benefits but also strengthens food security within the community. Therefore, this activity can be used as an example of an effective community-based nutrition intervention in hypertension control.

E. AUTHOR CONTRIBUTIONS

Fitria Wahyu coordinated the activity. Maydinar, Fitria Wahyu, prepared the hypertension counseling materials. Jingga, Ni Wayan, conducted the cooking demonstration. Misna, Sakina, prepared the introduction and literature review, and contributed to the writing of the results section. Mutiara, Jingga, prepared the methods and analyzed the results. Novia, Fitria Wahyu, Maydinar, prepared the discussion, analyzed the benefits of the activity, and finalized the editing. Mayumi, Novia, documented the activity.

F. REFERENCES

- Apriyanto, M. (2022). *Pengetahuan dasar bahan pangan*.
- Mardiana, M., Yulianto, Y., & Eliza, E. (2023). Pelatihan dan Pendampingan Pembuatan Makanan Cemilan Berbahan Pangan Lokal bagi Ibu PKK dan Kader Posyandu. *ABDIKEMAS: Jurnal Pengabdian Kepada Masyarakat*, 5(2), 146–151.
- Ode, W., Arifiana, N., Muhamad, L., Nadia, H., Oleo, U. H., & Tenggara, S. (n.d.). Pengaruh penambahan tepung wortel (*Daucus carota* L) TERHADAP karakteristik kimia nugget ikan nila (*Oreochromis* (The Effect of Carrot Flour Addition (*Daucus carota* L .) Universitas Halu Oleo . 140–153.
- Prasdiatika, R., & Nugroho, P. S. A. (2023). Pelatihan Pembuatan Nugget Lele dalam Upaya Pencegahan Penyakit Hipertensi pada Masyarakat Desa Kunden. *Jurnal Pengabdian Masyarakat Bhinneka*, 2(2), 32-39.
- Rahmawati, A., Wibowo, T. A., & Untari, D. S. (2024). Jurnal Pengolahan Perikanan Tropis Pembuatan Nugget Ikan Tongkol (*Euthynnus affinis*) Dengan Penambahan Tepung Kelor (*Moringa oleifera*) Sebagai Upaya Peningkatan Nilai Gizi Manufacturing Trunk Fish (*Euthynnus affinis*) Nuggets With The Addition Of Mor. 3(2023), 133–142.
- Raskun, A., Fahmi, A., Putri, N. M., Rahdyan, J. A., Arifah, A. N., Purandari, D. K. W., Umrana, Rahmadhani, D. S., Sanjaya, A., & Wardana, S. A. (2023). Sosialisasi Kegiatan Pengolahan Ikan Menjadi Makanan Sehat Nugget Ikan Di Desa Dane Rase , Lombok Timur. *Prosiding Seminar Nasional Gelar Wicara Volume*, 1(April), 23–24.
- Susanti, N., Aghniya, S. N., Almira, S. S., & Anisa, N. (2024). Hubungan Usia, Jenis Kelamin Dengan Penyakit Hipertensi Di Klinik Utama Paru Soeroso. *Prepotif: Jurnal Kesehatan Masyarakat*, 8(2), 3597–3604.
- Statistik, B. P. (2025). Produksi Perikanan Tangkap di Laut Menurut Komoditas Utama (Ton), 2023.



WHO (2023). Hypertension. Key Facts.

Winnarko, H., & Mulyani, Y. (2020). Uji Coba Produk Nugget Berbahan Dasar Ikan Cakalang (Katsuwonus Pelamis) dengan Penambahan Tepung Daun Kelor (Moringa Oleifera L). *JSHP : Jurnal Sosial Humaniora Dan Pendidikan*, 4(1), 13-20.