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STUNTING PREVENTION EFFORTS THROUGH THE PRODUCTION OF CATFISH NUGGETS: A CASE STUDY OF JANGKANG VILLAGE

UPAYA PENCEGAHAN STUNTING MELALUI PRODUKSI NUGGET IKAN LELE: STUDI KASUS DI DESA JANGKANG

Hendra Taufik[1], Desi Mutia Amanda[2], Bagas Pratama[3*], Dian Wijayanti[4], Fanesya Atmaja[5], M. Safri[6], Nizam Syahbana Usman[7], Andhika Fabian[8], Ayu Alifa[9], Miftah Hasanah[10], Nabila Alfia Sari[11]

[1,2,3*,4,5,6,7,8,9,10,11]Universitas Riau, Email: bagas.pratama4791@student.unri.ac.id

*email koresponden: bagas.pratama4791@student.unri.ac.id

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Abstract

Stunting remains a chronic nutritional problem in Indonesia, including in Jangkang Village, Bantan Subdistrict, Bengkalis Regency, where 7 of 149 children (4.7%) registered at the local health post were found within the red-line nutritional status category. This condition is presumably influenced by low community awareness of Clean and Healthy Living Behavior, limited access to information on stunting, and insufficient nutritional knowledge during pregnancy. This activity aimed to educate the community on stunting prevention while introducing catfish as an affordable local source of animal protein processed into nuggets. The activity was carried out in July 2026 using a qualitative approach, consisting of socialization on the definition, causes, and prevention of stunting, followed by a hands-on workshop on making catfish nuggets attended by 20 mothers of children under five, together with village officials and Posyandu cadres. Results showed enthusiasm and positive responses from both participating mothers and students of the local Islamic elementary school, who also tasted the product during a follow-up session, and active support from the village government, opening opportunities for sustainability through integration with routine Posyandu activities. This activity is expected to be a strategic step in reducing stunting rates in Jangkang Village through local food utilization.

Keywords : Stunting, Catfish, Nugget, Child Nutrition, Community Service.

Abstrak

Stunting masih menjadi masalah gizi kronis di Indonesia, termasuk di Desa Jangkang, Kecamatan Bantan, Kabupaten Bengkalis, di mana 7 dari 149 anak (4,7%) yang terdaftar di Pos Kesehatan Desa (Postu) setempat berada pada kategori status gizi garis merah. Kondisi ini diduga dipengaruhi oleh rendahnya kesadaran masyarakat terhadap Perilaku Hidup Bersih dan Sehat, terbatasnya akses

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informasi mengenai stunting, serta kurangnya pengetahuan gizi selama kehamilan. Kegiatan ini bertujuan untuk mengedukasi masyarakat mengenai pencegahan stunting sekaligus memperkenalkan ikan patin sebagai sumber protein hewani lokal yang terjangkau dan diolah menjadi nugget. Kegiatan dilaksanakan pada Juli 2026 dengan pendekatan kualitatif, terdiri atas sosialisasi mengenai definisi, penyebab, dan pencegahan stunting, dilanjutkan dengan pelatihan langsung pembuatan nugget ikan patin yang diikuti oleh 20 ibu balita, bersama perangkat desa dan kader Posyandu. Hasil kegiatan menunjukkan antusiasme dan respons positif dari para ibu peserta maupun siswa Madrasah Ibtidaiyah Negeri setempat, yang turut mencicipi produk pada sesi lanjutan, serta dukungan aktif dari pemerintah desa yang membuka peluang keberlanjutan program melalui integrasi dengan kegiatan Posyandu rutin. Kegiatan ini diharapkan menjadi langkah strategis dalam menurunkan angka stunting di Desa Jangkang melalui pemanfaatan pangan lokal.

Kata Kunci : Stunting, Ikan Patin, Nugget, Gizi Anak, Pengabdian Masyarakat.

1. INTRODUCTION

Stunting is a form of chronic growth impairment in children characterized by a failure to achieve the ideal height for one's age, indicated by a height-for-age measurement below -2 standard deviations (SD) of the WHO child growth standards (Anna et al., 2026). This condition arises from sustained nutritional inadequacy over an extended period, particularly during the first 1,000 days of life spanning from conception until the child reaches two years of age. Stunting not only hinders physical growth and increases susceptibility to disease but also impairs cognitive development, thereby affecting a child's intelligence and productivity in adulthood (Kemenkes RI, 2016).

Based on the 2024 Indonesian Nutritional Status Survey (SSGI), the national stunting prevalence was recorded at 19.8%, whereas Riau Province saw an increase to 20.1%, making it one of the provinces with the highest rise in prevalence in Indonesia (Kemenkes RI, 2025).

One of the areas grappling with the issue of stunting is Jangkang Village, located in Bantan District, Bengkalis Regency. Geographically, Jangkang Village covers an area of approximately 30.41 km² and has a population of around 2,431 people. The village comprises four hamlets: Parit Tiung, Tambak Rejo, Asli, and Jangkang. Currently, the community in Jangkang Village faces several challenges, one of which is stunting.

Based on data obtained from the Jangkang Village Auxiliary Health Post (Postu), out of 149 children registered for growth and development monitoring, seven children (4.7%) fell into the “red line” nutritional status category on the *Kartu Menuju Sehat (KMS)* growth chart.

Several factors are believed to contribute to the high number of cases. The first factor relates to *Perilaku Hidup Bersih dan Sehat (PHBS)*, which have not yet been fully adopted by some residents, thereby increasing the risk of growth disorders in children. The second factor is limited public access to information regarding stunting, resulting in a lack of understanding concerning prevention and management measures. A third factor is the persistent lack of knowledge regarding adequate nutrition whether before, during, or after pregnancy, which creates a risk of growth disorders in children. A similar pattern of risk factors was also observed in a fish-based stunting prevention program in another village (Wardana et al., 2022).

Patin fish is a local food source with significant potential as a provider of animal protein, particularly in efforts to meet the community's nutritional needs. Beyond its substantial protein content, *patin* fish offers the advantages of affordability and ready availability in the market. Its flesh is characterized by a tender texture and unique flavor qualities that give the fish distinct value, as it is easily processed into a variety of food products. These characteristics also make *patin* fish more acceptable to children, offering potential for its development as a raw material for alternative food products to support the nutritional needs of this age group (Chakma et al., 2022). Therefore, there is a need for innovative fish-based food products that are both appealing and highly acceptable.

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Processing fish into nuggets is an innovation aimed at increasing children's interest in consuming fish, as their shape and flavor are more appealing than those of conventional fish products (Wardana et al., 2022). This initiative seeks to motivate the residents of Jangkang Village to adopt healthy dietary practices for toddlers that meet balanced nutritional standards, while also raising awareness about the importance of fish consumption particularly for children as a strategic measure to support efforts to reduce stunting rates in the village.

2. RESEARCH METHOD

This activity was conducted in July 2026 with the aim of raising public awareness about the importance of increasing fish consumption as a source of animal protein. A qualitative approach was employed for the activity. The program was designed to educate the community on preventing childhood stunting. The initiative began with an educational session covering the definition, causes, and characteristics of stunting, as well as prevention strategies. Once the community had gained an understanding of stunting, the activity proceeded to a workshop that actively involved participants in the hands-on process of making *patin* (silver catfish) nuggets.

The nugget-making process begins with cleaning and filleting the *patin* fish, followed by mincing the flesh until it reaches a smooth consistency. The minced fish is then mixed with pureed garlic and shallots, sweet potato flour and tapioca flour (to bind the mixture), and egg (to enhance texture and cohesion). All ingredients are thoroughly blended into a smooth, uniform mixture, which is then shaped as desired, steamed until cooked, and allowed to cool. Once cooled, the nuggets are coated in breadcrumbs before being fried until golden brown and ready to serve.

In this workshop, participants are invited to try their hand at preparing and tasting various dishes made from *patin* (silver catfish). The session is conducted interactively and includes a Q&A segment, allowing the audience to ask questions and share their views. Through these activities, the aim is to encourage the community to increase their consumption of fish-based animal protein and introduce it to their children, thereby helping to prevent childhood stunting.

As part of the series of activities, an outreach session themed “Enjoy Eating Fish” was held the following day, targeting students from the local State Islamic Elementary School (MIN); approximately 25–30 students from a single class participated. The activity aimed to foster a habit of eating fish from an early age as a long-term effort to support children's nutritional needs, while also serving as a means to introduce *patin* (silver catfish) nuggets to the children and gauge their acceptance of the product. The event concluded with a tasting session where the students sampled the *patin* nuggets.

3. RESULT AND DISCUSSION

Based on data obtained from the Jangkang Village Auxiliary Health Post (Postu), 149 children were registered for growth and development monitoring. Of this total, seven children (4.7%) were identified as having nutritional status falling within the “red line” zone on the *Kartu Menuju Sehat (KMS)*, the Child Health and Growth Card. The distribution of cases by hamlet is presented in Table 1.

Table 1. Distribution of Stunting Cases (Red Line) in Jangkang Village by Hamlet

No	Child Code	Hamlet
1	Child 1	Hamlet Asli
2	Child 2	Hamlet Jangkang
3	Child 3	Hamlet Asli
4	Child 4	Hamlet Jangkang
5	Child 5	Hamlet Asli
6	Child 6	Hamlet Tambak Rejo
7	Child 7	Hamlet Parit Tiung

Source: Data from the Jangkang Village Auxiliary Health Post (Postu), 2026

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Of the seven identified cases, Dusun Asli recorded the highest number (three children, or 43% of the total), followed by Dusun Jangkang (two children), while Dusun Tambak Rejo and Dusun Parit Tiung each recorded one case. Although the proportion of stunting cases (4.7% of all registered children) is not dominant, their concentration in specific hamlets indicates that environmental factors and access to nutritional information, as outlined in the introduction, play a significant role in the vulnerability of certain areas.

The workshop on making *patin* (silver catfish) nuggets was attended by 20 mothers with children under five, as well as the Village Coordinator, the Village Secretary, and local *Posyandu* (Integrated Health Post) volunteers. The involvement of village officials and *Posyandu* volunteers demonstrates the village administration's support for stunting prevention efforts and opens up opportunities for program sustainability through integration with routine *Posyandu* activities. The mothers' active participation during the workshop also indicates strong community interest in education regarding fish-based alternative food processing to meet children's nutritional needs.



Figure 1. Dissemination and practical demonstration of catfish nugget production during the "Stunting Discussion" event in Jangkang Village.

Source: Documentation by the 2026 Impactful KKN Team, Universitas Riau, 2026

The workshop participants responded positively to the processed *patin* (silver catfish) nuggets; the mothers showed enthusiasm while tasting the product and expressed optimism that their children at home would enjoy it.

As a follow-up step, the product's acceptance among children was assessed during a "Love Eating Fish" outreach event held the day after the workshop, involving approximately 25–30 students from a single class at a local State Islamic Elementary School (MIN). The students' response to the *patin* (silver catfish) nuggets was positive, suggesting that the product has the potential for broad acceptance among children. However, it should be noted that the MIN students belong to the primary school age group rather than the under-five (toddler) demographic, the primary target group for addressing stunting. Consequently, these results primarily reflect the general acceptance of the product's taste and texture among children, rather than directly demonstrating its impact on improving the nutritional status of toddlers.

This activity aligns with Presidential Regulation Number 72 of 2021 concerning the Acceleration of Stunting Reduction, which encourages the utilization of local food as a community-based nutritional intervention strategy.

This activity has several limitations that should be addressed in the implementation of follow-up programs. Product acceptance testing was conducted with primary school-aged children (MIN) rather than the under-five age group, the primary target for addressing stunting, meaning that product acceptance specifically among children under five requires further study. Furthermore, the activity did not include direct measurements of the children's nutritional status before and after the intervention; consequently, the program's impact on reducing stunting rates could not be quantitatively verified in

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the short term. Extended monitoring and periodic anthropometric measurements of children under five are necessary to evaluate the program's success more comprehensively.



Figure 2. Group Photo of the Universitas Riau "KKN Berdampak 2026" Team with Jangkang Village Residents

Source: Documentation by the 2026 Impactful KKN Team, Universitas Riau, 2026

4. CONCLUSION

Stunting remains a concern in Jangkang Village, Bantan District, Bengkalis Regency; seven out of 149 children (4.7%) registered at the auxiliary community health post (Postu) were found to have nutritional status in the "red zone." These cases are distributed across four hamlets, with the highest concentration in Dusun Asli, a situation likely driven by low community awareness regarding *Perilaku Hidup Bersih dan Sehat (PHBS)*, limited access to information on stunting, and a lack of nutritional knowledge before and during pregnancy. As part of the intervention efforts, an educational program and workshop were conducted on making *patin* (silver catfish) nuggets, an affordable animal protein source that appeals to children. The event was attended by 20 mothers of toddlers and supported by the Village Coordinator, Village Secretary, and *Posyandu* (Integrated Health Post) volunteers. Participant feedback was positive, indicating the product's potential as an alternative menu option for meeting family nutritional needs. The active support from village officials and *Posyandu* volunteers paves the way for the program's sustainability by integrating it with routine *Posyandu* activities, thereby ensuring that education on stunting prevention and the utilization of local foods like *patin* can continue in Jangkang Village.

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