

## PentaCOME 1000+: A Community Service Program to Reduce Stunting in Payangan District

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### Abstract

Stunting is currently one of the main health problems in Indonesia as indicated by an average of 24.4% of reported stunting rates among children in Indonesia. Gianyar is one of the regencies in Bali which has an average stunting rate of 12.1% which is above Bali's stunting rate of 10.9%. This activity aims to reduce stunting rates and develop ecotourism in Gianyar, Payangan districts and improve the quality of baby health. This program is carried out using the mentoring method with PT Sido Muncul as a partner through stunting education, distribution of katuk leaf extract and planting of family medicinal plants. Indicators of activity success are evaluated using a checklist including increasing knowledge, awareness and the formation of ecotourism. The targets of this activity were pregnant and lactating women, totalling 417 people, couples of childbearing age, and most of them had income levels below the minimum wage. The results of this activity found that 70% of the target community has a risk of stunting caused by low levels of family income

**Keywords:** stunting; PentaCOME; Sido Appears; Kedaireka

### Abstrak

Stunting saat ini menjadi salah satu masalah kesehatan utama di Indonesia yang ditunjukkan oleh rata-rata 24,4% angka stunting yang dilaporkan di kalangan anak-anak di Indonesia. Gianyar merupakan salah satu kabupaten di Bali yang memiliki rata-rata 12,1% stunting rate yang berada di atas stunting rate Bali sebesar 10,9%. Kegiatan ini bertujuan untuk menurunkan angka stunting dan pengembangan ekowisata kabupaten Gianyar, Payangan serta meningkatkan kualitas kesehatan bayi. Program ini dilakukan menggunakan metode pendampingan dengan PT Sido Muncul sebagai mitra melalui edukasi stunting, pembagian sari daun katuk dan penanaman tanaman obat keluarga. Instrumen yang digunakan untuk menilai keberhasilan program adalah cek list pengetahuan, kesadaran dan berdirinya ecowisata. Sasaran kegiatan ini adalah ibu hamil dan menyusui yang berjumlah 417 orang, pasangan usia subur calon pengantin dan sebagian besar memiliki tingkat pendapatan dibawah upah minimum. Adapun hasil dari kegiatan ini didapatkan bahwa 70% sasaran masyarakat memiliki resiko stunting yang disebabkan oleh rendahnya tingkat pendapatan keluarga

**Kata kunci:** stunting; PentaCOME; Sido Muncul; Kedaireka

### INTRODUCTION

Stunting is defined as a health condition caused by chronic malnutrition and is characterized by a child's height that is below the average for his age. Some of these children have difficulty achieving optimal physical and cognitive development, such as slow speech or walking, and consequently suffer from various diseases. According to the World Health Organization (WHO), if the prevalence of short toddlers exceeds 20 percent, it could pose a public health risk. (Directorate of P2PTM, 2018; National Team for the Acceleration of Poverty Reduction, n.d.)

In 2018, stunting cases in Indonesia ranked fifth in the world, with a prevalence of 30.8%, meaning that one in three toddlers in Indonesia is stunted. The government's massive efforts can reduce the stunting rate to 24.4%, or down 6.4% from 30.8% in 2018 to 2021. As stated in a message from Vice President K.H. Ma'ruf Amin dated May 11, 2022, the country's current goal is to reduce the prevalence of stunting by at least 3% by 2022 through the convergence of targeted intervention programs, specific, and sensitive. In September 2022, the Head of Bali Provincial Bappeda, I Wayan Wiasthana Ika Putra, reported that the stunting rate in Bali

Province was relatively low at 10.9%. Unfortunately, Gianyar regency, which is the focus area of the Faculty of Medicine and Health Sciences, Warmadewa University (FKIK), still has a stunting rate that is higher than the Bali provincial average (12.1%); therefore, the problem of stunting in the Gianyar district area still needs the attention of all parties. (National Team for the Acceleration of Poverty Reduction, n.d.) (Ministry of State Secretariat of the Republic of Indonesia, 2022) (Bali Media Center, 2022) (Sumadewi et al., 2022)

## **GENERAL DESCRIPTION OF THE COMMUNITY, PROBLEMS AND TARGET SOLUTIONS**

### **General description**

Payangan Subdistrict is one of the sub-districts in Gianyar Regency. It consists of 9 villages and 59 hamlets and has a total area of 75.88 km<sup>2</sup>, which is the largest in Gianyar Regency. The Faculty of Medicine and Health Sciences of Warmadewa University (FKIK Unwar) has adopted the Community Program Oriented Medical Education (COME) 1000 Early Life Days (1000 HAK) in Payangan District in the medical education curriculum since 2017, and will now become PentaCOME 1000+ to Stop Stunting and Create a Golden creation program Generations. Through the help of 1 student, 1 pregnant woman, her family, and her environment, couples of childbearing age (PUS), brides-to-be (catin), and tourism development, this program involves all students (ecotourism). The PentaCOME 1000+ program is FKIK Warmadewa's participation in the Kedaireka program of the Ministry of Education and Culture of the Republic of Indonesia (Kemendikbud RI). In accordance with the vision of the Independent Campus of the Ministry of Education and Culture of the Republic of Indonesia, the Kedaireka program aims to realize the benefits of synergizing the contribution of universities with the commercialization of industry for the progress of the Indonesian nation. (Gianyar County Central Bureau of Statistics, n.d.) (Faculty of Medicine and Health Sciences, Warmadewa University, 2022) ("Kedaireka - Independent Campus," n.d.)

The business and industrial world (DUDI) is PT Sido Muncul Tbk Jamu and Pharmaceutical Industry. Sido Muncul), which coincidentally has been working with FKIK Warmadewa in the Tri Dharma of Higher Education since 2017. The role of PT Sido Muncul in this program is based on the company's vision and mission, as well as partnership with Warmadewa University. The company's mission is to develop herbal-based products in the form of pharmaceutical preparations, traditional medicines, health foods, beverages, and cosmetics based on rational, safe, and honest research. Develop herbal medicine research on an ongoing basis. Assist and encourage governments, educational institutions, and the medical community to play a more active role in the research and development of herbal medicines. Increase public awareness of the importance of promoting health through a healthy lifestyle, the use of natural ingredients, and naturopathic remedies. ("PT Industri Jamu dan Farmasi Sido Muncul Tbk.," n.d.)

Initially, the FKIK Unwar COME 1000+ HAK Program was implemented throughout pregnancy, childbirth, and the first two years of a child's life (1000 Early Days of Life / CAH). Since becoming PentaCOME 1000+, a preconception program has been developed, which involves the preparation of catin couples to optimize their health so that the conception process not only goes smoothly but also produces healthy offspring. This preconception program utilizes the Electronic Ready for Marriage and Pregnancy (Elsimil) program to monitor the health of the bride and groom. The Elsimil application is an initiative of BKKBN to reduce the prevalence of stunting in Indonesia. (Faculty of Medicine and Health Sciences, Warmadewa University, 2022)

### **Problem**

Pregnant women and nursing mothers are at high risk of developing nutritional problems, especially during the first 1000 days of the fetus they carry or breastfeed; If the nutritional intake of pregnant and lactating women is inadequate, then the child is at greater risk of stunting. Similarly, the increase in nutritional needs during pregnancy is caused by the fetal development process, the nutritional needs of breastfeeding mothers are caused by the production process of breast milk (breast milk). (Faculty of Medicine and Health Sciences, Warmadewa University, 2022)

Breast milk is the most ideal source of nutrition for babies. According to Aprilia, factors that affect breast milk production are dietary factors, contraceptive use, breast care, sleep patterns, baby suction factors, and the frequency of breastfeeding. 100 ml per day and will continue to increase until the baby consumes 400-450 ml per day at two weeks of age. This amount can be maintained by breastfeeding the baby for the first six months, during which time breast milk can meet the nutritional needs of the baby. After six months, the baby's nutritional needs will increase, while his milk consumption will remain relatively constant, necessitating the introduction of complementary foods to meet his nutritional needs. (Aprilia D and Krisnawati, 2019) [Click or tap here to enter text.](#)

## Target solution

Several herbal components, including katuk leaves or sauropus androgynous, have been shown to stimulate breast milk production. Ibrahim and Pratiwi found in their review of nine journal articles that eating katuk leaves increases breast milk production, whether the leaves are processed into clear vegetables, katuk leaf extract, katuk leaf decoction, or biscuits or snacks for nursing mothers. Katuk leaves contain sterols and alkaloids that can increase milk production. In addition, katuk leaves contain vitamins A, B1, B2, C, calcium, iron, and phosphorus, so they are useful for meeting the micronutrient needs of nursing mothers. (Ibrahim and Pratiwi, 2021) (Ibrahim and Pratiwi, 2021; Triananinsi et al., 2020)

## METHOD

This activity uses an empowerment approach through mentoring and stunting education, toga planting and distribution of nutrition for pregnant women, breastfeeding and couples of childbearing age by external partners (PT Sido Appears). The initial stage is carried out through community land use education with family medicinal plants (TOGA), nutritional assistance, and standardized herbal medicines to the community, including Sido Muncul Sari Daun Kelor which is useful as additional nutrition for pregnant women, and Sido Muncul Suprasi which contains katuk leaves which are beneficial for breastfeeding mothers as well as additional nutritional assistance, brochures and pamphlets on information and education related to the health of couples of childbearing age. The next stage is problem-solving the factors causing stunting rates in families as well as training to health cadres, focusing on stunting prevention strategies and programs for pregnant women and mothers who have babies and toddlers through Counseling media such as brochures and pamphlets, interactive dialogues, and educational videos are used in training



**Figure 1.** Expansion of community land use through TOGA

This activity was carried out with the assistance of village officials from Kerta Village, Bukian Village, Puhu Village, Melinggih Village, Fruit Village, Melinggih Kelod Village, Kelusa Village, Bresela Village, Fruit Village, and Buah Kaja Village, as well as teams from the Payangan Health Center and Payangan Police. The presence and active participation of health cadres are evaluated, and the knowledge and abilities of cadres in stunting prevention are compared.

## RESULTS AND DISCUSSION

Participants of Community-Oriented Medical Education (COME) in Payangan, Gianyar are pregnant women and lactating mothers. There are 417 of them with different characteristics, such as age, academic status, and occupation.

Table 1. Characteristics of pregnant women and lactating mothers in Payangan Regency

Characteristic	Classification	Sum	Percentage
Age	< 20 years	31	7.4%
	20 – 25 years old	105	25.2%
	26 – 30 years old	165	39.6%
	31 – 35 years old	59	14.1%
	> age 35	57	13.7%
Academic Status	Uneducated	8	1.9%
	Sd	52	12.5%
	High School	217	52%
	Bachelor's Degree/Diploma	140	33.6%
Work	Housewives	173	41.5%
	Farmer	32	7.7%
	Businessman	59	14.1%

	Employee	89	21.3%
	Tourism staff	30	7.2%
	Teacher	19	4.6%
	Healthcare professionals	15	3.6%
Monthly income	< 1 million	115	27.5%
	1 - 2 million	177	42.5%
	2 - 3 million	78	18.7%
	> 3 million	48	11.3%
Total participants		417	100%

From the characteristics above, the majority of participants were aged 26 – 30 years (39.6%) which is the ideal age for pregnancy. There were still 31 participants (7.4%) who were too young for pregnancy. The readiness of these participants to take care of their children is a concern. There were 57 participants (13.7%) who were at high risk of becoming pregnant because they were over 35 years old.

From academic status, most of the participants were high school (52%). This academic status should be given some health education about the improvement of their babies so that the growth and development of children can be monitored. There were 140 participants (33.6%) in the Bachelor Degree who were ideal for raising babies with their prior knowledge. However, there were still 8 uneducated participants (1.9%) who raised concerns about how to properly care for their baby.

Regarding work, the majority of participants were housewives (41.5%). There are also health professionals in this community (3.6%), including dentists, midwives, nurses, and physiotherapists. Regarding monthly income, the majority of participants have a salary of 1 to 2 million per month (42.5%). This income is low enough to optimize the nutrition provided to the family. The inadequacy of household food security is related to nutritional status, such as waste-and stunting.

PentaCOME 1000+ HAK is a program that will continue for approximately two years. Currently, 417 pregnant women and nursing mothers have been documented in Payangan Regency. 39.6% of pregnant women are between 26 and 30 years old, which is the optimal age for pregnancy and child birth, while 7.4% of pregnant women are under 20 years old, who are too young. According to the American College of Obstetricians and Gynaecologists, 13.7% of women over the age of 35 are too old to conceive or give birth (ACOG) In addition to increasing the risk of pregnancy and childbirth complications in older women, it also decreases the quality of the mother's egg, thereby increasing the risk of fetal abnormalities.(Faculty of Medicine and Health Sciences, Warmadewa University, 2022)

Knowledge is directly proportional to the previous level of education. The majority of pregnant and lactating women in Payangan District have a high school diploma or higher (85.6%), while 12.5% have an elementary school education and 1.9% are uneducated. There is a significant correlation between the level of education and knowledge of pregnant and lactating women regarding high-risk pregnancies, including their knowledge of nutritional needs during pregnancy and lactation, according to a number of studies.(Auliana et al., 2016; No Corned Beef and Losu, 2015)

According to the regency/city minimum wage (UMK) data determined based on the Decree of the Governor of Bali Number 790/03-M/HK/2021 concerning the Regency/City Minimum Wage in 2022, the 2022 Gianyar UMK is IDR 2,656,009.00 per month. The majority of pregnant women in Payangan Regency are housewives (41.5%), which affects family income because it only comes from one source, namely their husbands. The majority of families with large incomes (70%) have a monthly income of less than two million rupiah, which is below the Gianyar MSE. There is a significant relationship between wages or family income and the incidence of stunting, according to Agustin and Rahmawati. The study revealed that 76% of stunted toddler families have incomes below the regional minimum wage (UMR), while 36% of non-stunted families have incomes below the UMR. A literature review conducted by Kuswati revealed that family income has a significant relationship with the incidence of stunting in toddlers aged 24-59 months, with toddlers from high-income families having a lower risk of stunting.(Bali Provincial Government Legal Documentation and Information Network, n.d.)(Agustin and Rahmawati, 2021)(Wahyudi et al., 2022)

## CONCLUSION

The PentaCOME 1000+ HAK program and the provision of additional nutrition for pregnant women, breastfeeding mothers, and their families, as well as assistance and education, will be able to reduce the stunting rate in Payangan Regency.

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