

## Children's Food Diversity in Kalianyar Village Bondowoso District as a Stunting-Free Village

**Yuana Dwi Agustin<sup>1</sup>, Andrielina Firdausih<sup>2</sup>**

<sup>1</sup>*Nursing Diploma III Program, Universitas Bondowoso, Bondowoso, Indonesia*

<sup>2</sup>*Counseling Guidance Study Program, Universitas Bondowoso, Bondowoso, Indonesia*

*Corresponding author: yuanaadwi1975@gmail.com*

### **ABSTRACT**

**Introduction:** Stunting is a chronic malnutrition problem due to lack of nutritional intake over a long period of time. The direct causes of stunting include maternal factors, poor food quality, food and water safety, inappropriate breastfeeding, etc. This study used a GIAN questionnaire through the East Java Provincial Health Office to collect data. This research aims to examine food diversity and dietary patterns.

**Method:** The research subjects were 15 mothers from the village of Kalianyar who were selected based on posyandu data.

**Result:** The results of this study indicate that more mothers gave birth to colostrum. The results also showed that breastfeeding was dominant at the age of 24 months, namely at the earliest stopped at the age of five months and the longest was at the age of 27 months. The results showed that the predominant children consumed vitamin A rich fruits and several others consumed green vegetables and other types of fruit and vegetables.

**Conclusion:** This is indicated by almost all study subjects who gave colostrum immediately after giving birth and predominantly gave exclusive breastfeeding for six months, although some gave formula milk from the age of five months.

**Keywords:** *Stunting; food diversity; dietary care.*

## Introduction

Indonesia is the fifth country that has the highest number of children under five with stunting conditions (Ministry of Health of the Republic of Indonesia, 2019). This is evidenced by the increasing prevalence of stunting from 2016 (27.5%) to 29.7% in 2017 (Ministry of Health, 2018). Ministry of Finance (2018) also explains that the RISKESDAS estimate shows that around 37% (9 million) Indonesian children experiencing stunting.

Stunting is the condition of children being too short at their age due to chronic malnutrition (Ministry of Finance, 2018). Stunting is a malnutrition condition related to inadequate nutrition in the past and includes chronic nutritional problems (Sutarto, Mayasari, and Indriyani, 2018). Stunting is a condition of toddlers who have a height minus two standard deviations from the WHO's median growth standard for children (Ministry of Health, 2018).

Malnutrition is the main factor that affects the occurrence of stunting. Maternal health and nutrition during pregnancy and before childbirth affects fetal growth and is at risk of stunting (Ministry of Health, 2018). The framework for the direct causes of stunting according to WHO (2014), namely, 1) poor nutritional status of mothers since pre-pregnancy and breastfeeding, as well as short maternal stature, 2) home environment, 3) poor food quality, namely low micronutrients, 4) provision of Inadequate feeding, namely the frequency and lack of feeding, 5) food and water safety, 6) inappropriate breastfeeding practices, and 7) clinical and sub-clinical infections (Kementerian Kesehatan Republik Indonesia, 2019).

Most pregnant women and children are malnourished. The 2014 National Individual Food Consumption Survey (SKMI) shows that most pregnant women in urban and rural areas experience problems with their intake of food, energy and protein (Ministry of Health, 2018). As many as 60% of children aged 0-6 months do not receive exclusive breastfeeding and children aged 2 out of 3 children aged 0-24 months do not receive breastmilk substitutes (Kementerian Desa, Pembangunan Daerah Tertinggal, dan Transmigrasi, 2017).

Stunting is bad for children's lives. Stunting can interfere with brain development, brain intelligence, and impair physical growth and metabolism (Ministry of Village, Development of Disadvantaged Areas, and Transmigration, 2017). The Ministry of

National Development Planning Bapenas wrote the results of research conducted by Kakitek, Jakub, Eberwein, Walters, and Shekar (2017) which show that stunting has an impact on health, namely failed growth, obstacles to cognitive and motor development, and the risk of contracting infectious diseases.

Based on this explanation, it can be emphasized that child nutrition has an effect on stunting. Researchers feel it is important to study the diversity of food and eating patterns in the village of Kalianyar as a stunting-free village.

## Method

### 1. Variable Identification

The variable examined in this study was food diversity. Variables of food diversity include breastfeeding since the beginning of birth, types of food given after the first three days of birth, types of supplementary food, age at stopping using pacifiers, age of formula feeding, and determinants of feeding.

### 2. Research subject

Subjects in this study were 15 mothers in the village of Kalianyar who had children under five years old (toddlers) and under two years old (baduta). Subjects were determined based on purposive sampling obtained from posyandu data around.

### 3. Instrumen Penelitian

Food diversity data were obtained using a GAIN questionnaire through the East Java Provincial Health Office.

## Result

The results showed that all subjects gave their first breast milk or colostrum during childbirth. As many as 80% of the subjects did not provide food and drink other than breast milk and 20% of the subjects gave food and drinks other than breast milk. Table 1 shows that almost all subjects (93.3%) did not give a pacifier while at the birthplace and as many as 6.7% of the subjects gave it at the delivery site.

Table 1. Data on pacifier delivery

No	Characteristics	Frequency	Percentage (%)
1.	Give	1	6,7
2.	Not Give	14	93,3
<b>Total</b>		15	100

Source: Primary Data, 2020

The results showed that all subjects were not given formula milk at birth at the place of birth. The results showed that the earliest age for children to stop breastfeeding was five months (6.7%) and the longest age was 27 months to stop breastfeeding (6.7%). The results of the study obtained data that the dominant child stopped breastfeeding at the age of 24 months (33.3%).

Table 2 Age Stop Breastfeeding

No	Age (Months)	Frequency	Percentage (%)
1.	5	1	6,7
2.	6	1	6,7
3.	12	1	6,7
4.	16	1	6,7
5.	18	1	6,7
6.	20	2	13,3
7.	24	5	33,3
8.	27	1	6,7
Total		15	100

Source: Primary Data, 2020

Table 2 shows that 33.3% of children were given formula milk when they were less than six months old and 66.7% of children were not given formula milk at the age of less than six months. The results of the study obtained data, that children were started to be given formula milk from the fifth day (6.7%) to the age of 27 months (6.7%) just given formula milk. A total of 33.3 parents did not know for sure the age of the child to start being given formula milk. Age 24 months is the most age (13.3%) children started to be given formula milk.

Table 3 shows that the types of food given to toddlers the day before the interview were carried out including yellow foods (sweet potatoes, carrots, and pumpkin), root foods, green vegetables, fruit rich in vitamin A, other fruits or vegetables, liver, gizzard, kidney, heart, and offal. As many as 33.3% of children consumed vitamin A-rich fruits, 26.7% of children consumed green vegetables, and 20% of other fruits or vegetables. There are no children who only drink breast milk.

Table 3 Types of Food Consumed

No.	Type of Food	Frequency	Percentage (%)
1.	Fruit rich Vit A	5	33,3
2.	Green vegetable	4	26,7
3.	Other fruit or vegetables	3	20,0
4.	Yellow food	1	6,7
5.	Sweet potato food	1	6,7
6.	Beef offal	1	6,7
Total		15	100

Source: Primary Data, 2020

## Discussion

The results showed that more mothers gave colostrum shortly after giving birth. In addition, almost all subjects did not provide pacifiers and formula milk at the place of delivery. Undernutrition since the baby was in the womb and in the early stages of newborns to the age of two years resulted in children growing short (Sutarto, Mayasari, and Indriyani, 2018) The key to overcoming stunting is adequate nutrition in the first 1000 days of birth (HPK), that is, newborn babies get colostrum and add six months of exclusive breastfeeding (Wartakesmas, 2018).

The results showed that the dominance of breastfeeding was stopped at the age of 24 months, namely the earliest stopped at the age of five months and the longest was the age of 27 months. The results of the study were conducted on 83 toddlers who were stunted, showing that one of the contributing factors was the absence of exclusive breastmilk (ASI) to children (Hidayat and Ismawati, 2019). The results of the same study by Ni'mah and Nadiroh (2015) show that exclusive breastfeeding is associated with stunting, that is, more than half of stunted children do not receive exclusive breastfeeding for six months.

The results showed that more than half of the subjects did not provide formula milk at the age of less than six months, namely the dominant subject was given formula milk at the age of 24 months. The results of Mediana and Pratiwi's (2016) research show that there is a significant relationship between formula consumption and the occurrence of stunting, because sufficient consumption of formula milk can complement the lack of macronutrients and micronutrients that can prevent stunting.

The results showed that the predominant children consumed vitamin A rich fruits and several others consumed green vegetables and other types of fruit and vegetables. A small number of children consume foods from tubers, green vegetables, fruit rich in vitamin A, fruit or other vegetables, liver, gizzard, kidneys, heart, and offal. Children with normal nutritional status have various food intakes, namely stunted children have lower intake of green vegetables, vegetables and fruit sources of vitamin A, other vegetables, milk, nuts, and eggs than children with normal nutritional status (Widiyaningsih, Kusnandar, Anantanyu, 2018 ). This shows the diversity of food intake consumed by the subjects, so that it encourages the creation of Kalianyar Village to become a stunting-free village.

## Conclusion

Kalianyar Village as a stunting-free village has good nutritional intake. This is indicated by almost all study subjects who gave colostrum immediately after giving birth and predominantly gave exclusive breastfeeding for six months, although some gave formula milk from the age of five months. The provision of complementary foods is also a variety of foods, namely fruit rich in vitamin A and several others consuming green vegetables and other types of fruit and vegetables. So that this supports the prevention and low rate of stunting in the village of Kalianyar.

## Reference

- Destiadi, Nindya, Sumarni. (2015) *Frekuensi Kunjungan Posyandu dan Riwayat Kenaikan Berat Badan Sebagai Faktor Resiko Kejadian Stunting pada Anak Usia 3-5 Tahun*. Media Gizi Indonesia. 1(1), 71-75.
- Hidayat & Ismawati. (2019) *Faktor-faktor Kejadian Stunting pada Balita di Wilayah Kerja UPT Puskesmas Kramatwatu Kabupaten Serang*. Jurnal Bimtas. 3(1) : 28-35.
- Kementrian Desa, Pembangunan Daerah Tertinggal, dan Transmigrasi. (2017) *Buku Saku Desa dalam Penangan Stunting*. Jakarta : Kementrian Desa, Pembangunan Daerah Tertinggal,dan Transmigrasi.
- Mediana S dan Pratiwi R. (2016) *Hubungan Jumlah Konsumsi Susu Formula Standar terhadap Kejadian Stunting pada Anak Usia 2-5 Tahun*. Jurnal Kedokteran Dipenogoro. 5(4) 1743-1751.
- Ni'mah K dan Nadhiroh SR. (2015) *Faktor yang Berhubungan dengan Kejadian Stunting pada Balita*. Media Gizi Indonesia. 10(1), 13-19.
- Tim Redaksi. (2018) *Buletin Jendela Data dan Informasi Kesehatan*. Jakarta : Pusat Data dan Informasi Kementrian Kehesehatan RI.
- Priyanto, E. (2019). Angka Stunting Masih Tinggi, Bondowoso peringkat ketiga di Jawa Timur. Kabar Jatim. Retrieved from <https://kabarjatim.com/angka-stunting-masih-tinggi-bondowoso-peringkat-ketiga-di-jawa-timur/>
- Purwanti, R. (2019). Program Gastizi 1000 dalam meningkatkan kapasitas kader Posyandu. AcTion: Aceh Nutrition Journal, 4(1), 15. <https://doi.org/10.30867/action.v4i1.144>
- Sutarto, Mayasari, dan Indriyani. (2018) *Stunting, Faktor Resiko, dan Pencegahannya*. Journal Agromedicine. 5(1) : 540-545

- Tim Nasional Percepatan Penanggulangan Kemiskinan (TNP2K). (2018) *Strategi Nasional Percepatan Pencegahan Stunting 2018-2024*. Jakarta : TNP2K.
- Widiyaningsih NN, Kusnandar, dan Anantanyu S. (2018) Keragaman Pangan, Pola Asuh Makan dan Kejadian Stunting pada Balita Usia 24-59 Bulan. *Jurnal Gizi Indonesia (The Indonesian Journal of Nutrition)*. 7(1) :22-29
- Wulanta E, Amisi MD, Punuh MI. (2019) Hubungan Status Sosial Ekonomi dengan Status Gizi pada Anak Usia 24-59 Bulan di Desa Kima Bajo Kecamatan Wori Kabupaten Minahasa Utara. *Jurnal KESMAS*. 8 (5).