

## THE FIRST 1000 DAYS OF LIFE IN URBAN DISTRICT OF INDONESIA: A PREVALENCE AND DESCRIPTIVE EPIDEMIOLOGY

Hashfi Khairuddin<sup>1\*</sup>, Dwi Pawitra Wulan<sup>2</sup>, Fahdah Hindriana Warsita Putri<sup>3</sup>,  
Achmad Mubarak Muchdi<sup>4</sup>

<sup>1</sup>Internship Doctor Program, Cempaka Putih District Primary Health Care,  
Ministry Of Health

<sup>2-4</sup>Cempaka Putih District Primary Health Care

Email Korespondensi: Hashhfi@gmail.com

Disubmit: 04 Juni 2024

Diterima: 24 Agustus 2024

Diterbitkan: 01 September 2024

Doi: <https://doi.org/10.33024/mnj.v6i9.15508>

### ABSTRACT

Children will experience stunting due to insufficient nutrition in the first 1000 days of life. 21.6% of children in Indonesia still suffer from stunting. It is interesting to study how the conditions of one of the most developed places in a country with a prevalence of stunting are still above the global average. This study aims to present a prevalence and descriptive epidemiology of the first 1000 days of life in Cempaka Putih District, Jakarta. This descriptive epidemiology study describes the number of sufferers of pregnant women with anemia or chronic energy deficiency and infants under two years of age who suffer from nutritional deficiencies such as underweight, wasted, or stunting. The data was taken from cohort data from the Cempaka Putih District health center and routine monthly checks at each integrated toddler service post in each Hamlet at the Cempaka Putih District. After that, a mapping is made of the cases in each Hamlet. 14.4% of pregnant women who received antenatal care in the Cempaka Putih sub-district suffered from anemia, while 11.7% suffered from chronic energy deficiency. It was found that 2.8% of infants under two years were underweight/severely underweight, 3.5% were wasted/severely wasted, and 2.4% were stunted/severely stunted. Only 6 out of 30 hamlets have no cases of pregnant women or toddlers with nutritional deficiencies. The number of pregnant women with anemia or chronic energy deficiency and prevalence of infants with underweight, wasted, or stunted in the Cempaka Putih district is much lower than in the provinces of Jakarta and Indonesia.

**Keywords:** Stunting, Prevalence, Urban, 1000 Days of Life

### INTRODUCTION

The foundations of optimum health, growth, and neurodevelopment across the lifespan are set during the first 1,000 days of life or roughly the period between conception and one's second birthday. However, in too many developing nations, poverty and the resulting state of

malnutrition undermine this base, causing earlier death and considerable morbidities, including poor health and, more perniciously, a huge loss of neurodevelopmental potential. (Cusick & Georgieff, 2016)

Children will experience stunting as a result of insufficient nutrition in the first 1000 days of

life. The World Health Organization (WHO) defines child stunting as having low linear growth during a period of essential development and a height for age less than -2 standard deviations. (World Health Organization, 2006) In addition to increased morbidity and mortality, poor child development and learning capacity, higher risk of infections and noncommunicable diseases in adulthood, and decreased productivity and economic capabilities, child stunting has both short-term and long-term effects. (Stewart et al., 2013) The first of six objectives of the Global Nutrition Targets for 2025 was to reduce child stunting. However, in light of each nation's development, particularly in poor nations where stunting rates are still high, WHO and UNICEF have delayed this goal until 2030. (World Health Organization, 2018)

Poor nutrition for pregnant women, whether in the form of chronic energy deficiency or anemia, is the starting point for stunting in children in the future. The prevalence of chronic energy deficiency in pregnant women in Indonesia reaches 17.3%, with quite striking differences between provinces. The highest chronic energy deficiency rate was found in Maluku Province, at 30.7%, and the lowest was in North Kalimantan Province, at 1.7%. Jakarta alone has 13.2% of pregnant women with chronic energy deficiency. Meanwhile, the prevalence of anemia in pregnant women is much higher, reaching 48.9% in Indonesia. (Badan Penelitian dan Pengembangan Kesehatan, 2019) Unfortunately, there is no data for each province for anemia in pregnant women.

Based on the results of the Indonesian nutritional status survey, in 2022, cases of stunting in

Indonesia will still be at 21.6%. There are still high differences between provinces in Indonesia. The highest prevalence of stunting is still at 35.3% in East Nusa Tenggara Province, while the lowest prevalence is at 8% in Bali Province. Jakarta itself still has 14.8% of stunted children. (Badan Kebijakan Pembangunan Kesehatan, 2023)

Cempaka Putih is a sub-district in Central Jakarta which is an urban area with easy access to good health, education, electricity and clean water. (Puri, 2021) It is interesting to study how the condition of one of the most developed places in a country with a prevalence of stunting is still above the global average. (World Health Organization, 2023) There is already data for the nutritional and laboratory status of pregnant women and infants under 2 years of age at the Cempaka Putih District Health Center. Unfortunately, no one has yet processed and mapped this data so that there is an overview of the conditions for the first 1000 days of life in the Cempaka Putih district. Therefore, this study aims to present a prevalence and descriptive epidemiology of the first 1000 days of life in Cempaka Putih District, Jakarta.

## LITERATURE REVIEW

Stunting is characterized by having a height-for-age z score (HAZ) that is less than 2 standard deviations (SD) below the average. HAZ is determined by subtracting the median value of an age- and sex-matched population from a standard population, and then dividing by the standard deviation of the standard population. The 2006 WHO growth criteria are the officially endorsed benchmark. Approximately 2.5% of children in a healthy population have a Height-for-Age Z-score (HAZ) that

is below 2 standard deviations (SD). A larger percentage below 2 standard deviations (SD) suggests an inadequate growing environment. Stunted children are a subgroup of individuals that experience linear growth retardation. (Group & de Onis, 2006; Leroy & Frongillo, 2019; World Health Organization (WHO), 1995).

The first thousand days encompass the most critical period in a child's growth and development. From conception till the twins' birthday, there are one thousand days. The duration of pregnancy is 270 days, and when combined with the first year of a child's life (365 days) and the second year (365 days), it totals 1,000 days. The thousand days provide a valuable chance to cultivate the physical and intellectual development of children till a later stage. (Arisman, 2009)

Stunting during the initial 1,000 days of life is linked to both immediate and long-term effects, such as decreased motor development, worse scholastic achievement, and limited economic capacity. (Walker et al., 2005). There are several factors that might put children at risk of nutritional difficulties and contribute to stunting. These include inadequate maternal education, lack of awareness, insufficient family income, a history of chronic energy deficiency, incomplete vaccination, and not receiving supplemental meals along with breast milk. (Syukur & Harismayanti, 2020). Stunting in children may be linked to maternal anaemia, particularly in developing nations, according to a systematic review that included 12 studies. This suggests that in order to end child stunting, it is essential to prevent anaemia in adolescent girls and women both before and throughout pregnancy. (Nadhiroh et al., 2023)

The WHO conceptual framework was valuable in identifying a wide array of variables that impact stunting during the first 1,000 days of life. A study conducted in Bangladesh revealed that child attributes, such as age, gender, and low birth weight and length, are also linked to early childhood stunting. Children with low body weight tend to experience stunting later in life. (Islam et al., 2020).

Therefore, in this study, we involved several variables that influence the incidence of stunting in children, namely pregnant women with chronic energy deficiency or anemia, infants with underweight/severely underweight, wasted/severely wasted, and stunted/severely stunted nutritional status based on WHO Z-Scores

## METHOD

This research method uses a case series study design, namely a descriptive epidemiological study of cases with the same diagnosis, which is helpful as an initial guide to formulating a hypothesis and find a prevalence for some case. In this case, the research will be conducted on pregnant women and infants under two years in Cempaka Putih District. The research was conducted from January to March 2023. The population in this study were all pregnant women who had their first antenatal care checks at the Puskesmas in the Cempaka Putih District and infants aged less than two years in the Cempaka Putih District. The data collection was sourced from antenatal care cohort data conducted at the Cempaka Putih District Health Center, as well as three sub-district Health Centers, namely the West Cempaka Putih Village Health Center, the East Cempaka Putih Village Health Center, and the Rawasari Village

Health Center. Data on the nutritional status of infants less than two years old comes from routine monthly checks at each integrated toddler service post in each Hamlet at the Cempaka Putih District.

After the data is collected, the data for pregnant women is divided into data for pregnant women with anemia and pregnant women with chronic energy deficiency. Meanwhile, the data for infants under two years old is divided into infants with underweight/severely underweight, wasted/severely wasted, and stunted/severely stunted nutritional status based on WHO Z-Scores. After the data was collected, data were collected on the distribution of pregnant women with anemia or chronic energy deficiency and infants under two years of age with deficiencies in nutritional status. After that, a mapping is made, which is divided based on Hamlet.

When the research process begins until the results are obtained, they always adhere to research ethics in privacy and confidentiality. Researchers guarantee the confidentiality of this data only for research purposes so as not to cause harm to all respondents. This study did not include the names and addresses of the respondents. The data taken were the respondents' identity, nutritional status, and laboratory results. A numeric code with a specific meaning replaces the respondent's identity and related variable data.

Before the research process begins, an ethical review is carried out. This is done so that the publication of research results has good protection for individual respondent data and can minimize risks that can harm respondents so that this research can provide the expected benefits.

## RESULT

**Table 1. Distribution of new pregnant women who have antenatal care at the Primary Health Care in the Cempaka Putih**

District/Subdistrict	January		February		March		Total	
	N	%	N	%	N	%	N	%
<b>Pregnant Women</b>								
West Cempaka Putih	21		24		33		78	
East Cempaka Putih	12		19		24		55	
Rawasari	12		18		17		47	
<b>Total (Cempaka Putih District)</b>	<b>45</b>		<b>61</b>		<b>74</b>		<b>180</b>	
<b>With Anemia</b>								
West Cempaka Putih	4	19	2	8,3	8	24,2	14	17,9
East Cempaka Putih	0	0	2	10,5	4	16,7	6	10,9
Rawasari	1	8,3	3	16,7	2	11,8	6	12,7
<b>Total (Cempaka Putih District)</b>	<b>5</b>	<b>11,1</b>	<b>7</b>	<b>11,5</b>	<b>14</b>	<b>18,9</b>	<b>26</b>	<b>14,4</b>
<b>With Chronic Energy Deficiency</b>								
West Cempaka Putih	1	4,8	2	8,3	7	21,2	10	12,8
East Cempaka Putih	1	8,3	1	5,3	5	20,8	7	12,7
Rawasari	1	8,3	1	5,6	2	11,8	4	8,5

<b>Total (Cempaka Putih District)</b>	3	6,7	4	6,6	14	18,9	21	11,7
---------------------------------------	---	-----	---	-----	----	------	----	------

Table 1 describes the number of new pregnant women each month who carry out antenatal care in Cempaka Putih District. Until now, there is no data for the number of pregnant women in the Cempaka

Putih District area. The percentage of anemia and chronic energy deficiency was compared with the number of new pregnant women who received antenatal care every month and the total number.

**Table 2. Distribution of Pregnant Women with Anemia and Chronic Energy Deficiency per Hamlet in West Cempaka Putih Sub-District**

	January		February		March	
	A	CED	A	CED	A	CED
H 01	2	-	-	1	1	-
H 02	-	-	-	-	-	-
H 03	-	-	-	-	-	-
H 04	-	-	-	-	-	-
H 05	-	-	-	-	5	3
H 06	-	-	-	-	-	-
H 07	-	-	-	-	1	1
H 08	-	-	-	-	-	-
H 09	-	-	-	-	-	-
H 10	1	-	1	-	-	1
H 11	1	1	1	1	-	-
H 12	-	-	-	-	-	-
H 13	-	-	-	-	1	2

Abbreviations: H: Hamlet; A: Anemia; CED: Chronic Energy Deficiency

**Table 3. Distribution of Pregnant Women with Anemia and Chronic Energy Deficiency per Hamlet in East Cempaka Putih Sub-District**

	January		February		March	
	A	CED	A	CED	A	CED
H 01	-	-	-	-	-	1
H 02	-	-	-	-	1	1
H 03	-	1	1	-	-	-
H 04	-	-	1	-	2	2
H 05	-	-	-	-	-	-
H 06	-	-	-	-	-	-
H 07	-	-	-	-	1	1
H 08	-	-	-	1	-	-

Abbreviations: H: Hamlet; A: Anemia; CED: Chronic Energy Deficiency

**Table 4. Distribution of Pregnant Women with Anemia and Chronic Energy Deficiency per Hamlet in Rawasari Sub-District**

	January		February		March	
	A	CED	A	CED	A	CED
H 01	-	-	-	-	-	-
H 02	-	-	1	1	-	-
H 03	-	-	-	-	-	-
H 04	-	-	1	-	1	-
H 05	-	-	-	-	-	2
H 06	-	-	-	-	-	-
H 07	1	-	-	-	-	-
H 08	-	-	1	-	-	-
H 09	-	1	-	-	1	-

Abbreviations: H: Hamlet; A: Anemia; CED: Chronic Energy Deficiency

Tables 2, 3, and 4 describe the monthly distribution of pregnant women with anemia and chronic energy deficiency in each sub-

district. This data collection was carried out in more detail down to the hamlet level in each sub-district.

**Table 5. Distribution of the nutritional status of infants under 2 years in Cempaka Putih District**

District/Subdistrict	January		February		March		Mean	
	N	%	N	%	N	%	N	%
<b>Children under two</b>								
West Cempaka Putih	435	66,6	403	64,3	391	65,8	409,6	65,3
East Cempaka Putih	181	74,4	194	80,8	193	83,9	189,3	79,6
Rawasari	285	75	309	81,5	278	75,3	290,6	77,3
<b>Mean (Cempaka Putih District)</b>	<b>300,3</b>	<b>70,6</b>	<b>302</b>	<b>72,7</b>	<b>287,3</b>	<b>71,7</b>	<b>296,5</b>	<b>71,6</b>
<b>With Underweight and Severely Underweight</b>								
West Cempaka Putih	10	2,3	9	2,2	12	3,1	10,3	2,5
East Cempaka Putih	10	5,5	9	4,6	10	5,2	9,6	5,1
Rawasari	6	2,1	6	1,9	6	2,2	6,0	2,1
<b>Mean (Cempaka Putih District)</b>	<b>8,7</b>	<b>2,9</b>	<b>8</b>	<b>2,6</b>	<b>9</b>	<b>3,1</b>	<b>8,5</b>	<b>2,8</b>
<b>With Wasted and Severely Wasted</b>								
West Cempaka Putih	6	1,7	5	1,2	7	1,7	6,0	1,4
East Cempaka Putih	2	1,1	3	1,5	3	1,5	2,6	1,3
Rawasari	1	0,3	3	0,9	2	0,7	2,0	0,7
<b>Mean (Cempaka Putih District)</b>	<b>3</b>	<b>0,9</b>	<b>3,6</b>	<b>1,2</b>	<b>4</b>	<b>1,4</b>	<b>10,6</b>	<b>3,5</b>
<b>With Stunted and Severely Stunted</b>								
West Cempaka Putih	5	1,1	6	1,4	10	2,5	7,0	1,7
East Cempaka Putih	8	4,4	7	3,6	8	4,1	7,6	4,1
Rawasari	7	2,4	8	2,6	8	2,8	7,6	2,6

Mean (Cempaka Putih District)	6,7	2,2	7	2,3	8,3	2,9	7,3	2,4
-------------------------------	-----	-----	---	-----	-----	-----	-----	-----

The percentage of the number of infants under two years in the Table 5 represents the number of infants under the age of two who were measured in that month or the average for the three months. The percentage of infants who are underweight and severely underweight, wasted and severely wasted, and stunted and severely stunted is obtained from the number of infants who have deficiencies in nutritional status compared to infants who were performed anthropometric measurement in that month or the average.

The data used is total sampling data from all infants under the age of two in each village in Cempaka Putih district. West Cempaka Putih Village in January, February, March had a target of 653, 627, and 603

toddlers with an average of 627.6 infants under the age of two. The East Cempaka Putih Subdistrict in January, February and March had a target of 243, 240 and 230 toddlers with an average of 237.6 infants under the age of two. The Rawasari subdistrict in January, February and March had a target of 380, 379 and 369 infants under the age of two, with an average of 376 infants under the age of two. The average target for infants under the age of two in Cempaka Putih district in January, February and March was 425.3; 415.3; and 400.6 with an average of these three months, namely 413.7 infants under the age of two years. In total, there were 71.6% of infants who took anthropometric measurements in the Cempaka Putih district.

**Table 6. Distribution of Nutrition Status Deficiencies per Hamlet in West Cempaka Putih Sub-District**

	January			February			March		
	U/SU	W/SW	S/SS	U/SU	W/SW	S/SS	U/SU	W/SW	S/SS
H 01	1	1	-	-	-	-	1	1	-
H 02	-	-	1	-	-	-	-	-	1
H 03	-	-	-	-	-	-	-	-	-
H 04	2	1	1	2	2	1	2	1	1
H 05	1	-	1	-	-	-	1	-	2
H 06	-	-	-	-	-	-	-	-	-
H 07	-	-	-	-	-	-	-	-	-
H 08	-	-	-	-	-	-	-	-	-
H 09	1	1	-	1	1	-	1	1	-
H 10	1	-	1	1	-	1	1	-	1
H 11	3	2	1	2	1	2	3	2	3
H 12	1	1	-	1	-	-	1	1	-
H 13	-	-	-	2	1	2	2	1	2

**Abbreviations:** H: Hamlet; U: Underweight; SU: Severely Underweight; W: Wasted; SW: Severely Wasted; S: Stunted; SS: Severely Stunted



**Table 7. Distribution of Nutrition Status Deficiencies per Hamlet in East Cempaka Putih Sub-District**

	January			February			March		
	U/SU	W/SW	S/SS	U/SU	W/SW	S/SS	U/SU	W/SW	S/SS
H 01	-	-	-	-	-	-	1	-	-
H 02	3	1	2	3	1	1	3	2	2
H 03	4		4	2	1	2	3	1	3
H 04	2	1	2	3	1	4	3	-	3
H 05	-	-	-	-	-	-	-	-	-
H 06	-	-	-	-	-	-	-	-	-
H 07	-	-	-	-	-	-	-	-	-
H 08	1	-	-	1	-	-	-	-	-

**Abbreviations:** H: Hamlet; U: Underweight; SU: Severely Underweight; W: Wasted; SW: Severely Wasted; S: Stunted; SS; Severely Stunted

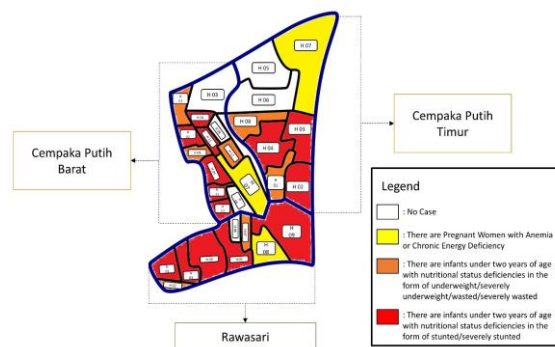
**Table 8. Distribution of Nutrition Status Deficiencies per Hamlet in Rawasari Sub-District**

	January			February			March		
	U/SU	W/SW	S/SS	U/SU	W/SW	S/SS	U/SU	W/SW	S/SS
H 01	1	-	1	1	1	1	2	1	2
H 02	1	-	-	1	1	-	-	-	-
H 03	-	-	1	1	-	1	1	-	1
H 04	2	1	2	1	1	2	2	1	2
H 05	1	-	-	2	-	2	-	-	2
H 06	-	-	-	-	-	-	-	-	-
H 07	-	-	-	-	-	-	1	-	-
H 08	-	-	-	-	-	-	-	-	-
H 09	1	-	3	-	-	2	-	-	1

**Abbreviations:** H: Hamlet; U: Underweight; SU: Severely Underweight; W: Wasted; SW: Severely Wasted; S: Stunted; SS; Severely Stunted

Tables 6, 7, and 8 show the distribution of infants with nutritional status deficiencies in each sub-district. In more detail, this

table divides the data according to the hamlet of each baby who has a deficiency in nutritional status.



**Figure 1. Mapping Cases of Deficiency of Nutritional Status in Infants and Pregnant Women with Anemia and Chronic Energy Deficiency.**



Figure 1 briefly maps each hamlet in the three sub-districts under the Cempaka Putih District. There were only 6 Hamlets out of 30 where there were no cases of mothers with anemia or chronic energy deficiency and nutritional status deficiencies in infants under two years of age. 3 Hamlet marked yellow indicates that there are pregnant women with anemia and chronic energy deficiency without infants under two years of age with

nutritional status deficiencies. In 7 Hamlets in the Cempaka Putih District, there are still infants with nutritional status deficiencies in the form of underweight/severely underweight/wasted/severely wasted with/without pregnant women with anemia or chronic energy deficiency. 14 out of 30 hamlets still have infants under two years old who are stunted or severely stunted.

## PEMBAHASAN

Cempaka Putih is one of the districts in central Jakarta, which is an urban area. There is easy access to education with 23 early childhood education programs, 30 kindergartens, 21 elementary schools, 10 junior high schools, 11 high schools and 11 universities with an area of only 4.69 km<sup>2</sup> and a population density of 18,227 population/km<sup>2</sup>. Access to health is also very easy with 3 community health centers, 9 health clinics, 34 private physician practices, 5 birth centers, 6 hospitals and 22 pharmacies. Access to electricity, clean water, and good waste management are also available in the Cempaka Putih District. (Puri, 2021) It is interesting to study how the conditions of one of the most developed places in a country with a prevalence of stunting are still above the global average. (World Health Organization, 2023)

From the results of this study, 180 new pregnant women carried out antenatal care in the Cempaka Putih sub-district. 14.4% of these new pregnant women suffer from anemia. If we compare it with Indonesia, where 48.9% of pregnant women suffer from anemia, this is much smaller. Even the data between urban and rural areas in Indonesia differ slightly; urban areas

have 48.3% anemia sufferers, while rural areas have 49.5% anemia sufferers. (Kementerian Kesehatan Republik Indonesia, 2018) Another study in one of the sub-districts in Jakarta, particularly in Grogol, shows that 35.7% of pregnant women who check themselves at the Puskesmas suffer from anemia. (Tara & Ciptono, 2022) The data processed in this study were data from 180 first-trimester pregnant women. Meta-analysis studies have proven that anemia in the first trimester increases the risk of having a low birth-weight baby. (Rahmati et al., 2017)

In this study, 11.7% of pregnant women suffered from chronic energy deficiency. This is not much different from data from basic health research; in Indonesia, there are 17.3%, and especially in Jakarta, as much as 13.2% (Kementerian Kesehatan Republik Indonesia, 2018) Research at the Grogol Health Center shows that 42.6% of pregnant women suffer from chronic energy deficiency. (Tara & Ciptono, 2022) This can be dangerous because chronic energy deficiency is strongly associated with low birth weight infants and is 1.74 times more likely to be stunted. (Aryastami et al., 2017; Restu<sup>a</sup> et al., 2017)

Previous research has proven that anemia and chronic energy deficiency can cause infants to be born with low birth weight. (Rahmati et al., 2017; Restu<sup>a</sup> et al., 2017) Infants with low birth weight can increase the risk of stunting. (Aryastami et al., 2017) Therefore, this is the importance of antenatal care carried out by pregnant women from the first trimester, followed by anthropometric measurements every month until the baby is two years old. In Indonesia, routine anthropometric measurements for infants from birth to 5 years old are called Integrated Service Posts or *Pos Pelayanan Terpadu* (Posyandu). This measurement is carried out in each hamlet, just like a home visit, so it is hoped that the nutritional status of toddlers can be monitored and immediate intervention can be carried out to treat deficiencies in nutritional status. Unfortunately, the implementation of antenatal care is not carried out in every hamlet, instead pregnant women are free to choose where they will carry out antenatal care so that until now there is no total data on pregnant women in Cempaka Putih district.

The amount of anthropometric measurement data in infants under the age of 2 years is 296 infants under 2 years each month or 71.6% from the total infants under 2 years old. The target from the Jakarta Provincial Health Office is at least 80%. Even though Indonesia has succeeded in reducing the stunting rate from 30.8% in 2018 to 21.6% in 2022, not achieving the measurement target may be one of the reasons the stunting rate in Indonesia is still relatively high. (Badan Kebijakan Pembangunan Kesehatan, 2023; Kementerian Kesehatan Republik Indonesia, 2018)

This study found that 2.8% prevalence of infants under two years old in the Cempaka Putih sub-district were still underweight and severely underweight. This figure is still much lower than in Jakarta as a whole, 13.2%, and in Indonesia 15.2%. For infants under two years in the Cempaka Putih sub-district with wasted and severely wasted nutritional status, the prevalence is 3.5%. Meanwhile, in Jakarta, it is at 10.1%, and in Indonesia, it is at 10.2%. (Kementerian Kesehatan Republik Indonesia, 2018)

The stunting prevalence in the Cempaka Putih area is 2.4%, very far from DKI Jakarta's 14.8% and Indonesia's 21.6%. (Badan Kebijakan Pembangunan Kesehatan, 2023) The World Health Organization (WHO) defines child stunting as having low linear growth during essential development and a height for age less than -2 standard deviations. (World Health Organization, 2006) Stunting is a manifestation of chronic malnutrition which, of course, can also result in cognitive delays. (Reinhardt & Fanzo, 2014) Therefore, it is crucial to prevent it from the first 1000 days of life because stunting after a baby is over two years old is often irreversible and can result in a child with delayed growth and development. (Black et al., 2013) This includes when there is already malnutrition, whether it is detected when a baby is born with low birth weight, or if a baby under two years old is underweight or wasted, it must be treated immediately. Due to unique findings in Indonesia, it is stunting increased 1.6x from 0-12 to 12-23 months almost in every city. (Badan Kebijakan Pembangunan Kesehatan, 2023) Therefore, monitoring for children in the first 1000 days of birth and children with nutritional deficiencies must be prioritized.

One of the results of this study was to make a detailed mapping of the conditions of the first 1000 days of life in each hamlet in Cempaka Putih District. This is done because routine anthropometric examinations are carried out monthly on infants under two years old in each hamlet. Unfortunately, it was found that Cempaka Putih District had yet to reach the minimum target of 80% of infants being examined every month. Therefore, this mapping is expected to help health cadres to carry out visits and examinations, especially in infants with nutritional status deficiencies. Mapping can also provide an overview to cross-sectors, such as the district or sub-district government, regarding the condition of stunting in the Cempaka Putih district. Because the problem of stunting is not only a health problem but is also influenced by household, environmental, socioeconomic and cultural influences. (Stewart et al., 2013)

The limitations of this study are that there is no data on all pregnant women in the Cempaka Putih district. In contrast to the obligation to measure anthropometry in infants under five years of age in the Cempaka Putih district, there is a total sample. Even though in this study there were only 71.6% of infants who were measured.

## KESIMPULAN

The number of pregnant women with anemia and chronic energy deficiency in the Cempaka Putih district is lower than in Jakarta Province and Indonesia. This is also in line with the low prevalence of infants who are underweight/severely underweight, wasted/severely wasted, and stunted/severely stunted in

Cempaka Putih District compared to Jakarta Province and Indonesia.

It is hoped that in the future research can be carried out with more complete data covering all pregnant women and infants under two years old in the Cempaka Putih district.

This research can be a starting point for other research to be able to determine the factors that cause stunting and provide more adequate management of stunting in the future.

## DAFTAR PUSTAKA

- Arisman, M. B. (2009). Buku ajar ilmu gizi: Gizi dalam daur kehidupan. *Jakarta: Penerbit Buku Kedokteran EGC*, 2, 275.
- Aryastami, N. K., Shankar, A., Kusumawardani, N., Besral, B., Jahari, A. B., & Achadi, E. (2017). Low birth weight was the most dominant predictor associated with stunting among children aged 12-23 months in Indonesia. *BMC Nutrition*, 3(1), 1-6.
- Badan Kebijakan Pembangunan Kesehatan. (2023). *Hasil Survei Status Gizi (SSGI) 2022*.
- Badan Penelitian dan Pengembangan Kesehatan. (2019). *Laporan Nasional Riskesdas 2018*.
- Black, R. E., Victora, C. G., Walker, S. P., Bhutta, Z. A., Christian, P., De Onis, M., Ezzati, M., Grantham-McGregor, S., Katz, J., & Martorell, R. (2013). Maternal and child undernutrition and overweight in low-income and middle-income countries. *The Lancet*, 382(9890), 427-451.
- Cusick, S. E., & Georgieff, M. K. (2016). The role of nutrition in brain development: the golden opportunity of the "first 1000 days." *The Journal of*

- Pediatrics*, 175, 16-21.
- Group, W. H. O. M. G. R. S., & de Onis, M. (2006). WHO Child Growth Standards based on length/height, weight and age. *Acta Paediatrica*, 95, 76-85.
- Islam, M. S., Zafar Ullah, A. N., Mainali, S., Imam, M. A., & Hasan, M. I. (2020). Determinants of stunting during the first 1,000 days of life in Bangladesh: A review. *Food Science & Nutrition*, 8(9), 4685-4695.
- Kementerian Kesehatan Republik Indonesia. (2018). *Laporan Nasional Riset Kesehatan Dasar 2018*.
- Leroy, J. L., & Frongillo, E. A. (2019). Perspective: what does stunting really mean? A critical review of the evidence. *Advances in Nutrition*, 10(2), 196-204.
- Nadhiroh, S. R., Micheala, F., Tung, S. E. H., & Kustiawan, T. C. (2023). Association between maternal anemia and stunting in infants and children aged 0-60 months: A systematic literature review. *Nutrition*, 115, 112094.
- Puri, E. A. (2021). *Cempaka Putih Subdisctrict in Figures* (A. Sucipto (ed.)). Badan Pusat Statistik Kota Jakarta Pusat.
- Reinhardt, K., & Fanzo, J. (2014). Addressing chronic malnutrition through multi-sectoral, sustainable approaches: a review of the causes and consequences. *Frontiers in Nutrition*, 1, 13.
- Restu<sup>a</sup>, S., Sumiaty<sup>b</sup>, S., Irmawati<sup>c</sup>, I., & Sundari, S. (2017). *Relationship of chronic energy deficiency in pregnant women with low birth weight newborn in Central Sulawesi Province*.
- Stewart, C. P., Iannotti, L., Dewey, K. G., Michaelsen, K. F., & Onyango, A. W. (2013). Contextualising complementary feeding in a broader framework for stunting prevention. *Maternal & Child Nutrition*, 9, 27-45.
- Syukur, S. B., & Harismayanti, H. (2020). Stunting Problems in Pregnant Women and Children Within 1000 Days of Early Life. *International Journal Paper Advance and Scientific Review*, 1(2), 47-52.
- Tara, A. A. D., & Ciptono, F. (2022). Prevalensi dan determinan anemia pada ibu hamil di Puskesmas Grogol Petamburan Jakarta Barat periode 2019-2021. *Tarumanagara Medical Journal*, 4(1), 41-47.
- World Health Organization. (2006). *The who child growth standards*. World Health Organisation Geneva.
- World Health Organization. (2018). *The extension of the 2025 maternal, infant, and young child nutrition targets to 2030*. UNICEF discussion paper.
- World Health Organization. (2023). Levels and trends in child malnutrition: UNICEF/WHO/World Bank Group joint child malnutrition estimates: key findings of the 2023 edition. In *Levels and trends in child malnutrition: UNICEF/WHO/World Bank Group joint child malnutrition estimates: key findings of the 2023 edition*.
- World Health Organization (WHO). (1995). *Physical status: The use of and interpretation of anthropometry, Report of a WHO Expert Committee*. World Health Organization.