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## STUNTING PREVENTION: HOW TO DIFFERENTIATE STUNTING AND SHORT STATURE. A COMMUNITY SERVICE WEBINAR WITH AISIYIAH REGIONAL LEADER IN MALANG

*Pencegahan Stunting: Bagaimana Membedakan Stunting dan Perawakan Pendek? Sebuah Webinar Pengabdian Masyarakat dengan Pimpinan Daerah Aisyiyah Kota Malang*

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### ABSTRACT

**Background:** The issue of stunting and short stature continues to receive attention from the Indonesian government because it will determine the quality of Indonesian Human Resources in the future. Stunting is short, but short is not necessarily stunting. Stunting is a condition of failure to thrive due to malnutrition in the first thousand days of a child's life. Short-stature is at risk of stunting if the problem is not immediately resolved. Protein intake from animal meat is playing as an essential role in preventing stunting. **Purpose:** The program aims to increase the knowledge of Aisyiyah regional leader in Malang in distinguishing between short stature and stunting and how to prevent it. **Method:** We conducted a seminar online using the pandemic COVID-19-prevention-protocol. Participants asked questions and discussed this topic. **Conclusion:** A working group program and pocketbook in stunting prevention in children as a collaboration between the medical faculty of the University of Muhammadiyah Malang, Regional Leader of Aisyiyah Malang, and Dewan Pimpinan Wilayah advisor will be formed.

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### INTRODUCTION

The issue of short stature and stunting continues to receive attention from the Indonesian government. Short stature is one of the most common nutritional problems in infants and toddlers in developing countries, including Indonesia. Stunting is a chronic problem caused by a lack of nutrition for a long time. Stunting can occur when the fetus is still in the womb and only appears when the child is two years old, this is called the first 1000 days of life, starting 270 days (9 months) during pregnancy, plus 730 days or the first 2 years of life. The effect is in the form of growth disorders in children; namely, the child's height is lower or shorter (short) than the standard age. According to UNICEF, stunting is defined as the percentage of children aged 0 to 59 months whose height

is below the 3rd percentile (< P3) or below minus two SD (< -2 SD) of the WHO Z Score growth curve. Short stature is if the height for age and sex is below the 3rd percentile or below minus two SD (< -2 SD) of the WHO Z growth curve. It affects not only physical but also cognitive abilities. Stunting is usually realized too late. When your child's height is relatively lower than his peers', concerns arise. Stunting always starts with weight loss, followed by a decline in cognitive function. Children with stunting are at risk of having an IQ below 90. This means that children can only attend school up to grade 3 at most junior high schools. Stunting is very different from short stature. Short stature is if the height according to age and sex is below the 3rd percentile. Unlike stunting, short stature does not affect the condition of the brain. Short children can still be helped before they become stunted. This opportunity only exists until the child turns 2 years old.

Nutritional intake plays a vital role in preventing stunting; animal protein is the most essential intake in preventing stunting. Short stature and stunting are common growth problems in developing countries. The Basic Health Research (Riskesdas) results in 2007 showed the prevalence of stunting in Indonesia was 36.8%. In 2010, there was a slight decrease to 35.6%. However, the prevalence of stunted toddlers increased again in 2013 to 37.2%. In Indonesia, primary-school-age children with short stature prevalence reached 23.6% in 2018. The prevalence of very short and short toddlers aged 0-59 months in Indonesia in 2017 was 9.8% and 19.8%, respectively. This condition increased from the previous year, namely the prevalence of very short toddlers at 8.5% and short toddlers by 19%. The province with the highest prevalence of very short and short toddlers aged 0-59 months in 2017 was East Nusa Tenggara, while the province with the lowest prevalence was Bali.

**Objective** This seminar aims for Aisyiah Malang Regional Leader to know how to distinguish whether short stature in a child is stunting or only short stature and how to prevent it.

### **Method**

The counselling method carried out is an online Webinar with all Aisyiyah Malang members, considering that when this webinar was held, it was still in a Covid 19 Pandemic situation. After a thorough and complete presentation, there would be a question-and-answer session, which indicated whether the Aisyiyah Malang members understood what had been explained or not. still need further exploration.

### **Results and Discussion**

From this webinar, fascinating results were obtained from various critical and weighty questions that were asked by many participants, so that the final outcome of this webinar would be to form a working group or task force (task) for the eradication of stunting from Aisyiah, which the central Aisyiah leadership would approve. Various questions from seminar participants will be discussed in this paper (several similar questions are summarized in one question) :

1. As prevention of stunting in toddlers is the fulfillment of nutrition, but unfortunately, our society's economy does not allow it to meet these nutritional needs, what is the solution?

Answer: in all areas where the Community Health Center has a program called *Pemberian Makanan Tambahan* (PMT), namely Supplementary Feeding, for pregnant women and children under five, where PMT is based on essential amino acids which require a lot of protein for pregnant women and toddlers who lack energy and calories. This PMT has been launched since 2017 in all PKM and can only be obtained evenly in all PKM since 2019, so that if people who feel their economy is lacking to meet the nutritional needs of pregnant women and toddlers can get this PMT program at the nearest PKM so that it can prevent the occurrence of stunting in babies to be born and in existing toddlers. This program is given every month, it is hoped that pregnant women and children under five will control PKM while monitoring anthropometry, namely weight, height, and upper arm circumference.

2. Seeing the complexity of the causes of stunting, what else can be done in the community to break the chain of stunting, considering that there have been many programs that have been carried out, but in fact, stunting persists?

Answer: This actually goes back to the 5 main pillars, which are;

1. ANC (Ante Natal Care), which is a periodic examination of pregnant women starting from the first trimester or starting early in pregnancy, detects early if the fetus being conceived is malnourished and must be treated as soon as possible usually if the fetus in the womb is malnourished because the mother carrying it is also malnourished and this is what causes stunting in a child. Periodic measurements can see malnutrition in the upper Arm Circumference of pregnant women, which

correlates with pregnant women's nutritional status. From Riskesdas data, it turns out that ANC coverage for pregnant women is still very low. From the 2013 Riskesdas, it turns out that the coverage of complete neonatal visits is still very low: 39.3%,

2. **Consumption Patterns.** It is the eating habit of a person or group of people to choose the food they consume, influenced by the intrinsic - physiological, psychological, and extrinsic - natural environment (eating habits in general, local food), culture, religion, and social environment. The challenges of consumption patterns to prevent stunting include consumption behavior of macronutrient deficiencies, lack of animal protein, lack of fruit vegetables, micronutrient deficiencies, IMD (Early Breastfeeding Initiation) practice, exclusive breastfeeding for 6 months. The percentage of starting breastfeeding for children aged 0-23 months by province starting from breastfeeding less than one hour after the baby is born (Early Breastfeeding Initiation) is 34.5 percent. And it turns out that based on the proportion of the population consuming less than 400 grams of fruit and vegetables/person/day, it is still significant, which is around 97 percent, the proportion is almost the same in all age groups.
  3. **Personal Hygiene.** The existence of CTPS (Washing Hands with Soap) must always be encouraged and reminded at all times because this prevents the occurrence of diseases related to digestion, such as diarrhea (42-44%). Five essential times to wash hands with soap: before eating, after defecating, before holding the baby, after cleaning defecation, before preparing food. The research found that the percentage of respondents who did not practice CTPS at all at 5 essential times was the majority, which was around 67% of the total respondents.
  4. **Socio-Cultural.** Many people from various cultures believe pregnancy to be a particular condition full of danger. It is dangerous for pregnant women and their fetuses and is considered in multiple situations, both from the real world and the supernatural. To protect the mother and her fetus, various societies worldwide are required to comply with specific prohibitions that pregnant women and postpartum mothers must obey. Foods or sources of nutrition prohibited by pregnant women and postpartum mothers include fish and eggs, squid, etc. However, it supports the fulfillment of protein nutrition in pregnant women.
  5. **Family Economy.** Susenas 2016 data: Population with expenditure > Rp. 500,000/month have energy consumption that exceeds the recommended dr (> 2000 kcal/cap/day) Population with an expenditure of Rp. 150,000 - Rp. 499.000/month have energy consumption below the recommended (1799 – 1374 kcal/cap/day). Toddlers with parents with low-income levels have a 4x more significant risk of suffering from poor nutritional status than children under five who have parents with adequate income levels..
3. **How to deal with children with GTM (Gerakan Tutup Mulut/Close Mouth Movement) on the food to be given?**  
 Refusing to eat is a normal phase that every child will go through. Children don't want to eat / GTM because they have their own "fear" about these foods. Whether it's in terms of aroma, shape, appearance, texture, or taste of food that is still new to him. So tips on how to give food to children are::
    - a. Give food in small portions.
    - b. Serve food with an attractive appearance.
    - c. Vary food with various flavors.
    - d. Serve in small portions.
    - e. Avoid giving drink when eating.
    - f. Introduce new foods slowly.
    - g. Involve children in an interesting way
    - h. Make mealtimes as comfortable as possible
    - i. Be a good role model for children.
  4. **Can stunting be overcome at the age of 2 years?**  
 It can be overcome for stunting by meeting their nutritional needs and regularly monitoring their weight and TB/PB. But if the child's age is more than 2 years, what cannot be overtaken is the cognitive ability of the brain because the golden period of brain growth is under the age of 2 years.

5. How to prove if it's really short stature because it's really short stature because it's familial?  
We have to measure the height of the mother and the height of the father then calculate according to the formula to see how the mid parental height is in boys and girls, and later the expected target height will be obtained so that it can be known whether the short stature obtained in children is still following the height targets that are obtained from their parents or enter the stunting criteria.

### Cara Menghitung Tinggi Midparental dan Tinggi Target

- Tinggi midparental (perempuan):  

$$\frac{(\text{Tinggi ayah} - 13 \text{ cm}) + (\text{Tinggi ibu})}{2}$$
- Tinggi midparental (laki-laki):  

$$\frac{(\text{Tinggi ibu} + 13 \text{ cm}) + (\text{Tinggi ayah})}{2}$$
- Tinggi target:  
 Tinggi midparental  $\pm$  2 SD (1 SD = 4,25 cm)

6. Can fortified rice be used for stunting prevention?  
Fortified rice is rice in which several minerals and micronutrients (often zinc and iron) are added to improve food quality and reduce population health problems and zinc. But what is related to stunting prevention is animal protein instead of carbohydrates. However, carbohydrates are still needed in daily consumption because animal protein is very closely associated with cognitive function in children who can stunt. Several studies have shown that insufficient intake of animal protein (a complete source of essential amino acids with high bioavailability) in complementary foods for children aged 6-24 months is the cause of the high number of stunting cases in 49 countries. Animal protein sources are eggs, fish, chicken, beef or goat, milk, and food for particular medical purposes. Research in Ecuador proves that consuming an additional egg a day for 6 months can reduce stunting by about 47%. In addition, research conducted by WHO also shows that immediate intervention in a child who is experiencing weight faltering (weight gain per month below the standard) can prevent stunting by 34% at the age of 1 year and 24% at the age of 2 years.
7. How about fish that has been exposed to formalin for daily food?  
All foods that contain formalin are not suitable for health. Formalin or formaldehyde is a chemical used as a preservative. The function of formalin is as a disinfectant, but it is misused to preserve fish by some people. The negative impact of high formalin food on body health:
1. Digestive Disorders: Due to direct contact with the digestive tract, the first danger of formalin food is that it can cause digestive disorders. Formaldehyde foods can cause nausea, vomiting, and abdominal pain. In addition, severe symptoms can also appear, namely the appearance of ulcers in the stomach.
  2. Respiratory Disorders: The dangers of formalin food can also threaten the health of the respiratory tract. This is especially the case if the compound is inhaled for a long time, which can irritate from the nose to the throat.
  3. Allergies: Exposure to formaldehyde in the body can also cause allergic reactions. Formalin side effects are generally felt by people who are sensitive and vulnerable..
8. How about the nutrition of fish that has been preserved? Is it lowering its nutrition?  
All fish preserved by using the method of smoking, salting or drying will not reduce the levels of nutrients contained in the fish. So there's no need to worry that there will be a decrease in nutrition.
9. Can snacks at school containing preservatives and food coloring be tolerated?

If you want your child not to snack at school, a mother must be creative in making snacks at home with a taste and shape similar to snacks at school and instilling the principle that being frugal by not snacking at school can increase savings at home.

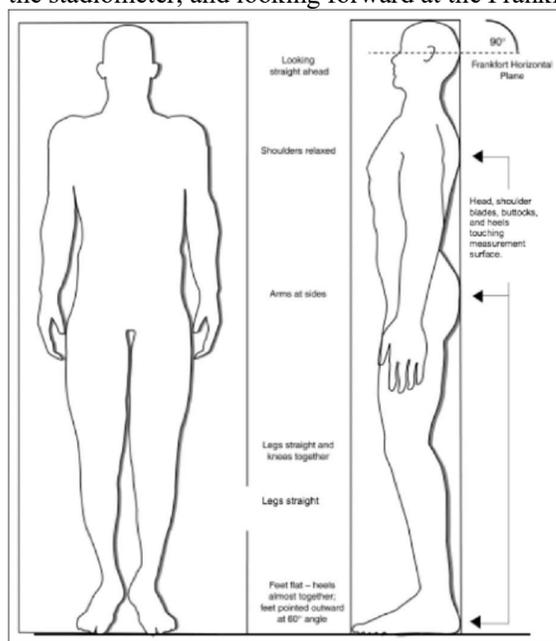
10. How to detect stunting at preschool age?

Early detection of stunting should be carried out as early as possible, by taking anthropometric measurements every month in preschool

11. How to measure the correct height or body length?

Body length or height reflects the long-term nutritional status of a child. Body length was measured using a measuring board for children under 2 years of age or PB less than 85 cm. 2 people carried out body length measurements. The first gauge positions the baby so that the baby is straight on the measuring board so that the baby's head touches the headboard in the Frankfort Horizontal Plane. The Frankfort plane is the anatomical position when the lower orbital margin and the upper auditory meatus are in line. The second gauge holds the baby's knees and heels flat against the footboard.

For children who can stand unaided and cooperatively, height is measured using a stadiometer with a headrest at a 90° angle to the movable stadiometer. The child is measured barefoot or in light socks and with minimal clothing so the gauge can check that the child is in the correct position. When taking measurements, the child must stand upright, feet together, heels, buttocks, and back of head touching the stadiometer, and looking forward at the Frankfort plane.



12. How to measure micronutrients?

Micronutrients exist in various types of food, so it is expected to meet micronutrient needs by changing food. One type of food has several types of micronutrients. If you are still not sure, please consult the nearest health service.

13. What benefits will you get from this webinar?

After the webinar is finished, a working group program from the Medical Faculty of UMM will be formed. A pocket book on stunting prevention in children in collaboration with the Regional Leader of Aisyiah Malang will be made..

UMM CDME FAKULTAS KEDOKTERAN UNIVERSITAS MUHAMMADIYAH MALANG  
PIMPINAN DAERAH AISYIAH KOTA MALANG

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**TIPS PENTING CEGAH STUNTING** SKP IDI

**Speaker 1**  
dr. Pertiwi Febriana Chandrawati, M.Sc, SpA  
Stunting atau Perawakan Pendek?  
Bagaimana Upaya Pencegahannya?

**Speaker 2**  
dr. Ade Erni, M.Gizi, Sp.GK  
Tatalaksana Gizi Pada Kasus Stunting

**Speaker 3**  
Dr. dr. Febri Endra BS, M.Kes, FISPH, FISCM  
Pendekatan Holistik Komprehensif Pada  
Kejadian Stunting

**Moderator**  
dr. Lisna  
Kepala Puskesmas Kedungkandang Malang

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## Conclusion

Short stature and stunting are growth problems commonly found in developing countries. Stunting is very different from short stature. Stunting is the percentage of children aged 0 to 59 months, with a height below minus two or more ( $>-2$  SD) of the WHO Z Score growth curve. It's not just a physical impact but a cognitive one as well. Short stature or short stature is if the height according to age and gender is below the 3rd percentile. In contrast to stunting, short stature does not affect the condition of the brain. Stunting can be prevented by paying attention to the quantity and quality of food consumed by toddlers. Infants are recommended to consume 1.5 g/kg/day of protein, while toddlers are 1.1 g/kg/day. High-quality protein is obtained from animal sources (because it contains complete amino acids). A working group program from the Medical Faculty of UMM will be formed. A pocketbook on stunting prevention in children will be developed in collaboration with the Regional Leader of Aisyiah Malang and DWP advisors to the Coordinating Ministry for Human Development and Culture as protectors.

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