

# Developing Parenting Programs for Young Mothers as Preventive Stunting Efforts in Bangkalan, Madura

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## ABSTRACT

The problem of stunting in children currently becomes a hot issue in Madura. It could be occurred because many young mothers still do not realize the importance of nutrients in food and they consume foods that are just filling. This study aims to: (1) conduct preliminary studies and find the needs from the society, (2) develop parenting programs (devices / materials, implementation, and program evaluations) to young mothers based on need assesment, (2) test the feasibility of materials and instruments based on aspects of validity, and (3) revise devices and instruments based on results feasibility test. This research is a development study adapting the research model of Borg and Gall (1983). Subjects in this study were pregnant women and the staff in community health centers in Bangkalan, Madura, which are spread in 6 districts. The results showed that one of factor impacting stunting is that mothers have low knowledge in nurturing, educating, and caring for children. This study also find that the proposed parenting program met the criteria of validity.

**Keywords:** *stunting, young mother, parenting, program, Madura*

## 1. INTRODUCTION

Lately, Indonesia was experiencing nutritional problems in children, namely stunting. Even though, one of the priority indicators in Development with Sustainable Goals (SDGs) is the issue of children's nutritional status. This becomes very crucial because it is related to the quality of human resources in the future. Stunting prevalence data collected by the World Health Organization (WHO), Indonesia was third rank in the country with the highest prevalence in the Southeast Asia/South-East Asia Regional (SEAR) region [1]. The average prevalence of stunting toddlers in Indonesia in 2005-2017 was 36.4%. Based on Nutrition Monitoring or "Pemantauan Status Gizi" (PSG) data for the past three years, stunting has the highest prevalence compared to other nutritional problems such as malnutrition, thinness and obesity. The prevalence of stunting toddlers has increased from 2016 which is 27.5% to 29.6% in 2017. Specifically, in East Java Province, more than one in 10 babies are born with low body weight, and 36% of children under five years of stunting (low height compared to age) in 2013 [2].

In Bangkalan, in 2015, there were 240 toddlers experiencing malnutrition (marasmus, kwashiorkor, thin, stunting), which increased by 36 toddlers from 2014 [3]. Based on the latest data from interviews with staffs at 6 Community Health Center in Bangkalan from June to August 2019, it was found that the number of stunting cases at Kamal was 309 cases, at Socah as many as 113 cases, Bangkalan as many as 536 cases, Burneh as many as 79 cases, Arosbaya as many as 260 cases, and Tanah Merah as many as 95 cases. The most dominant cause of stunting is the low awareness of the community, especially

mothers/pregnant women about the importance of nutrients in food and considers the food consumed is quite filling. In addition, babies who were exclusively breastfed in Bangkalan were only 49.8%.

Because of the high number stunting cases in Bangkalan Madura and their impacts, the efforts are needed to overcome them. The efforts could include preventive, curative, and rehabilitative care.

## 2. LITERATURE REVIEW

Stunting is a chronic malnutrition status during growth and development which is presented through height z-score by age less than -2 standard deviations (SD) based on growth standards according to WHO[1]. In nutritional problems, especially stunting in children need to get more attention because it will affect negative impacts, including: impaired brain development, impaired intelligence, impaired physical growth, impaired metabolism, decreased cognitive ability and learning achievement, and decreased immunity [4]. Stunting also has negative impacts in children's future lives, that they will easily get health problems, low in school performance, and minimal economic productivity [5]. Seeing the effects caused by stunting, this phenomenon becomes crucial in relation to the potential of children becoming the investment of the nation.

Stunting does not just happen, but it starts from pre-conception when a teenager becomes an undernourished and anemic mother. It becomes worse when pregnant women with inadequate nutritional intake, even more so when

mothers live in environments with inadequate sanitation. Impaired health and fetal development caused by a lack of nutritional intake (Fe, folic acid, hemoglobin) will cause babies to be born with low body weight [6]. The lack of a mother's presence in antenatal care services during pregnancy also increases the risk of low birth weight babies [7].

Mothers with low maternal education have a 1,9 times greater risk of having children with stunting compared to mothers with high maternal education [8]. In contrast, adequacy of nutrition in pregnant women is influenced by the level of knowledge of the mother of the importance in paying attention to nutrition during pregnancy [9]. Pregnant women with good nutritional knowledge are expected to be able to choose foods that are of good nutritional value and are balanced for themselves and the fetus. The knowledge about a good nutrition can help someone learn how to store, process and use quality food ingredients for consumption. Lack of knowledge can cause nutritious food ingredients that are not consumed optimally.

Stunting can actually be prevented as early as possible through the conscious efforts of young mothers of the importance of paying attention to nutritional status during pre-pregnancy, pregnancy and post-birth periods. During this time, efforts to prevent and handle stunting have also been carried out by the Community Health Center, including: counseling but only limited to health information and the dangers of stunting and this is felt to be ineffective because it has not touched the realm of awareness of the importance of parenting in infant and toddler care. Why mother, because as an object that has an important role in the key to the success of caring for children in getting good nutritional status. To optimize maternal awareness of nutritional status during the first 1000 days of life (*1000 Hari Pertama Kehidupan*), it is necessary to do health literacy through parenting education activities. This program is very appropriate because this program is included in the education of adults, especially parents or mothers as direct actors. This activity aims to develop abilities, enrich knowledge, enhance new skills, and change attitudes and behavior [10].

Young mothers become subjects in this study because the results of preliminary studies showed that Madura is still keep the tradition of the phenomenon of young marriage. Furthermore, these young mothers are still at the stage of adolescence, which their age range of 10-15 years, so they are psychologically not ready to be a mother [11]. In addition, the low maternal knowledge of mothers can be significantly affected by their exposure to accurate and inaccurate information [12]. Therefore, this study is needed to develop a parenting program providing accurate information so that the mother's knowledge will increase.

This study is a preliminary study of multi-year research, addressed to community health centers, young mothers, and community policy holders. This study aims to look at the extent of the research subject's need for a parenting program, but also aims to develop a parenting program for young mothers as an effort to prevent stunting in Madura. If this program is valid, it can be applied and delivered to young mothers as a whole so that understanding of nutrition and

health will increase and preventive stunting can run. In other words, young mothers will have health literacy, namely the ability of a person to obtain, process and understand the basis of health information and the service needs needed for appropriate health decision making [13].

### 3. METHODS

#### 3.1. Procedure

This research used a mixed method model. It aimed to obtain more comprehensive data. The first data was qualitative used to answer the purpose of the research goal, which was to know the extent of the importance of parenting program. Besides that, the second method was the research and development method by adapting the Borg and Gall model [14]. This model was suitable because it was to develop the new products. In this study, the product produced was a parenting program as an effort to prevent stunting for young mothers. The research procedures included:

1. Conduct preliminary studies and analysis of needs (Interview).
2. Planning (defining abilities, formulating goals, determining material order)
3. Develop initial products (preparing material, preparing slides, evaluation equipment) and validated by experts.
4. Conduct preliminary field tests on 35 subjects.
5. Revise the initial field test results.
6. Conducting operational field tests on 107 subjects.
7. Revise the final product results.
8. Disseminate and implement the product.

This study discussed only the first to third procedures, while the fourth to eighth procedures have not been done so that it will be discussed in subsequent studies. The working definition of variables is as follows.

1. Parenting program is a form of education targeting adults especially parents to develop abilities, enrich knowledge, enhance new skills, and change attitudes and behavior
2. Parenting program material to prevent stunting contains 4 scopes, among others: stunting problems and their causes, parenting patterns according to the times, good eating patterns, and sanitation.

#### 3.2. Participants

The research subjects were taken purposively based on the social characteristics of the area (coastal, suburb, and city) and the characteristics of the number of stunting cases. The number of subjects involved in this study was 18 staffs of "Puskesmas", 12 young mothers, and 3 experts (material experts, media experts, and evaluation experts). "Puskesmas" called the community health center is public health development center providing comprehensive and integrated services to the community under its coverage in the forms of principal activities and there is a community

health center in every sub-district. The involvement of the participants was represented by 6 sub-districts including Bangkalan, Arosbaya, Burneh, Tanah Merah, Socah, and Kamal.

### 3.3. Data Collection

Data collection was carried out through unstructured interviews with community health center staffs and young mothers. There was a guideline to interview the community health center staffs and mothers displayed in Table 1.

**Table 1 Guidelines for an Interview**

| Subject                        | Questions   | Answer |
|--------------------------------|---|--------|
| <b>Community Health Center</b> | How many the newest stunting in there?  |        |
|                                | What the name of village that is the highest case of stunting?  |        |
|                                | What the main cause of the high case of stunting?   |        |
|                                | What the efforts that have been done by community health center and other institutions?                   |        |
|                                | What are the mother's responses when the community health center do many efforts for preventing stunting? |        |
| <b>Parents (mother)</b>        | What do you know about stunting?  |        |
|                                | What the causes of stunting?  |        |
|                                | What are they effects of stunting?  |        |
|                                | Where do you get the information about the stunting?  |        |
|                                | What do yo do to prevent stunting?  |        |

**Table 2. Guidebook's Quality Assessment Tool**

| Aspects           | Criteria | Tools                                | Data Source           |
|-------------------|----------|--------------------------------------|-----------------------|
| <b>Material</b>   | Validity | A material validation questionnaire. | An expert.            |
|                   |          | A learning media expert.             |                       |
| <b>Instrument</b> | Validity | A test validation questionnaire.     | An evaluation expert. |
|                   |          |                                      |                       |

- a. Tool of material validity, assessed by content quality and display quality.
- b. Tool of test validity, assessed by the suitability of aitem with the level of mother's cognitive and the level of socio economic in Bangkalan.

## 4. FINDINGS AND DISCUSSION

### 3.1. Findings

Data analysis was carried out both qualitatively and quantitatively. Qualitative analysis aimed to acquire the importance of parenting program.

#### 1. Puskesmas Socah

The total cases of stunting in Socah until June, 2019 was about 107 cases. The high cases of stunting were in Socah and Keleyan, and there were cases in 7 villages in Socah. One cause of stunting case in Socah was because young mothers had low awareness in maintaining the nutrition for pregnancy and 1000 days of life.

The level of education of young mothers in Socah was Elementary School and Junior High School. The community health center in Socah created pregnancy mom's classes in every month guided by a midwife in every village to decrease the cases of stunting. The contents in this class included prenatal phase, 1st trimester phase, 2nd trimester phase, 3rd trimester phase, childbirth, illness, and complication, and also baby care. The young mothers were interested when participating in the class. Unfortunately, they also forgot the information quickly, and finally they did not implement it. The community health center also monitored the children and their mother through "Posyandu" or integrated health center in every month. An integrated health office (called as "Posyandu") is one form community-based health resources managed and organized from, by, for and with the community in organizing health development. It locates in every village in the sub-district.

#### 2. Puskesmas Kamal

The number of stunting cases recorded by Puskesmas Kamal up to June 2019 was 309 cases. The village with the most stunting cases were Banyuajuh and Kamal. The main cause of stunting in there was not the economic problems, but parents did not understand how to choose and process the nutrition for their children.

The level of education of young mothers in Kamal was a high school and an undergraduated level. The efforts created by Puskesmas reducing the number of stunting cases in Kamal are counselling and monitoring of stunting cases in each village. The material included the impact of stunting, the causes of stunting, and growth and development. The response of young mothers to the program was that they were enthusiastic and also were ready to apply. The monitoring program have also carried out through "Posyandu" and counselling from village midwives.

#### 3. Puskesmas Bangkalan

Puskesmas Bangkalan recorded at least 536 stunting cases until June 2019. The villages with the most stunting cases were Sembilangan and Pejagan villages. The main cause of stunting in the Bangkalan was due to the lack of parental knowledge of children and many children who were not cared for by their own mothers.

The level of education of young mothers in Bangkalan was an elementary school and high school level. Efforts made by the community health center to reduce the number of stunting cases were just screening data, and not yet in prevention. These efforts were carried through "Posyandu" in every month.

#### 4. Puskesmas Arosbaya

Puskesmas Arosbaya recorded at least 260 cases of stunting until June 2019. The villages with the most stunting cases were Tengket and Glonggan. The main causes of stunting were an improper care process during pregnancy and disease infection.

The level of education of young mothers in Arosbaya were elementary schools and high schools level. The programs held by community health center reducing the number of stunting cases were giving milk /additional food, assisting to children affected stunting, monitoring to their homes. The material delivered when mentoring and monitoring was about nutrition of pregnant women, childbirth, and diseases that occur in children. Pregnant women were interested and enthusiastic, but the results had not been realized due to economic factors. “Posyandu” worked in every month and assisting to stunting toddlers was done everyday.

### 5. Puskesmas Burneh

The number of stunting cases recorded by the Puskesmas Burneh until June 2019 was 169 cases. The village with the most stunting cases was Tanjung village which reached 60 cases. The main cause of stunting in Burneh was due to a lack of parental knowledge regarding nutrition during pregnancy, illness, and healthy hygiene behavior.

The level of education of young mothers in Burneh graduated from elementary school and high school. Program worked by the health center to reduce the number of stunting cases was providing additional nutrition to pregnant women. Some of them were interested and enthusiastic to carry out, but they were also not care. In Burneh, “Posyandu” was done in every week with providing supplementary feedings.

### 6. Puskesmas Tanah Merah

Puskesmas Tanah Merah recorded at least 95 cases of stunting t occurred in Tanah Merah District until June 2019. The villages with the most stunting cases were Tanah Merah Laok, Pettong, Tanah Merah, Degeh, and Jangkar villages. The main cause of stunting were the lack of knowledge of young mothers about nutrition of pregnant women in the first 1000 days of pregnancy and the lateness of child immunization.

The level of education of young mothers in Tanah Merah was graduated of elementary schools and junior high schools. Programs made by the puskesmas to were establishing “Posyandu”, counseling and individual monitoring. The activity was making of healthy food for children in every week. Some young mothers were indifferent and some were more curious and practiced it. Quantitative analysis was used to asses the validity based on the data in Table 2. The results of this analysis displayed in Table 3.

**Table 3. Validation Result by Experts**

| Experts    | Total Score | Percentage | Category  |
|------------|-------------|------------|-----------|
| Content    | 53          | 94,64      | Very good |
| Media      | 66          | 91,6       | Very good |
| Instrument | 138         | 92         | Very good |

### 3.2. Discussion

Based on qualitative data in a preliminary study, there were some similarities in the initial data from them: 1) the average of total stunting cases in six places was more than 100 cases, 2) the main factor of stunting in children was the low knowledge in parenting, especially mothers who play an important role in caring, educating, and caregiving, 3) programs held by community health centers were still limited in counseling nutrition and health, and it did not involve the parenting.

Children who born to educated women will avoid malnutrition which manifests as being underweight and stunting [15]. In contrast, the results showed that the main cause of stunting in children was the mother’s knowledge about the role and the task in caring, educating, and caregiving. It related to research by Sulastrri that many cases of stunting occured in mothers who have low education and economic level, do not work, and limited knowledge about children nutrition [16]. Syahrul et al. also stated that mothers with low in education and low in family income became the main factor that effect in stunting [17]. In additional, Hapsari concluded that the maternal knowledge about nutrition was the most dominant factor in stunting children aged 12 until 59 months in Boyolali, Central Java [18]. A previous study in Padang, Indonesia also showed that the factors affecting stunting in children implicated the education level of mothers and the family incomes [19]. It clarifiyed that the mothers’ knowledge became the dominant factor of stunting in children.

Mothers had limited information about the effects of stunting and the importance of parental roles in caring, educating, and caregiving their children. They also didn’t know how to prevent the stunting in children through improvement in parenting. Especially in Madura, based on a preliminary research, the level of education of mothers was in elementary school to senior high school. Although, mothers have several sources in parenting such as their parents, their families, and their friends, they have to need other information from additional formal sources even other programs [20].

In Makassar, Indonesia, parenting had significant correlation with the incidence of stunting in children aged 24 until 59 months [21]. Therefore, the young mothers needed to know the more information about caring, educating, and caregiving through parenting program. Parenting programs are recommended for the prevention and treatment of externalizing in the all of development aspects in children [22]. It was in accordance with Undang Undang No. 30 in 2017 concerning the national education system, that the parenting education became an important and strategic matter in supporting the implementation of education to achieve national education goals [23]. Parenting program also could enhance the psychosocial functioning of parents [24].

Parenting program has many benefits, such as (1) giving supports for parents and decrease stressful in parenting, (2) teaching a special skill for parents, (3) making parents in reducing behaviour problems of children, (4) enhancing self-confidence and feeling competent in parents, and (5) upgrading the quality of communication between parents and children [25]. The family was the smallest unit in

society that has various functions, one of them was an educational function. Its function aimed to grow the family as the first education and the main education. To realize all of that, it should be held a parenting education program for parents, especially for young mothers.

## 5. CONCLUSION

Based on the results in this study, several conclusions could be drawn as follows: 1) the parenting program was needed for the prevention of parenting because the mothers still had limited knowledge about parenting and there was no material from the community health center about the role of the family, and 2) materials and instruments for parenting program had met the criteria for material and media. Future research should implement the media and parenting program instruments for young mothers so that the effectiveness of the program could be known.

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