

RESEARCH ARTICLE



THE RELATIONSHIP BETWEEN NUTRITIONAL HEALTH SERVICES FOR PREGNANT WOMEN AND THE INCIDENCE OF STUNTING IN LHOK BOT, ACEH JAYA

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Abstract

Health services are an effort provided by the public health center (*puskesmas*) to the community which includes planning, implementing, evaluating, recording, reporting, and pouring it into a system. Stunting is a condition of failure to thrive in children under five as a result of chronic malnutrition so that children are too short for their age and period. Growth will be stunted unlike normal-born children in general. Pregnant women are a group that is vulnerable to nutritional problems. Lack of nutrition for pregnant women has a very large impact on the child they are carrying. The purpose of this study is to determine if there is a relationship between maternal health services pregnant women with stunting and the relationship between nutrition of pregnant women who experience SEZ and stunting in the working area of the Lageun Public Health Center, Setia Bakti sub-district, Aceh Jaya Regency. The method used is a quantitative method through a cross-sectional approach. The indicators used to assess health services for mothers pregnant women were ANC, p-value = 0.095 ($p > 0.05$), pregnant women received at least 90 Fe pills (blood-enhancing tablets) p-value = 0.002 ($p < 0.05$), pregnant women who attended counseling nutrition/class of pregnant women p-value = 0.246 ($p > 0.05$), pregnant women got nutritional monitoring resulted p-value = 0.004 ($p < 0.05$), households with pregnant women had family latrines with p-value = 0.435 ($p > 0.05$), pregnant women who had access to safe drinking water resulted p-value = 0.590 ($p > 0.05$), households with pregnant women had health insurance results p-value = 0.435 ($p > 0.05$). Nutrition of pregnant women resulted p-value = 0.001 ($p < 0.05$). The results of the study found that there was a relationship between nutritional health services for pregnant women and the incidence of stunting. The results were carried out with the chi-square test to obtain results from the relationship between health services for pregnant women and the incidence of stunting.

Keywords: Health Services, Maternal Nutrition, Stunting

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1 | INTRODUCTION

Health service is an effort provided by the public health center to the community which includes planning, implementing, evaluating, recording, reporting, and pouring in a system. Health services are also the responsibility of the government in an effort to achieve community welfare. Pregnant women, which is known as ANC, pregnant women get a minimum of 90 Fe pills (blood-boosting tablets), pregnant women who take nutritional counseling/pregnant women's classes, pregnant women get nutritional monitoring. Access to safe drinking water and households with pregnant women have health insurance. The problem in these services is the lack of health services for pregnant women and can result in stunting.

Stunting is a condition of failure to thrive in children under five as a result of chronic malnutrition so that children are too short for their age and their growth period will be stunted unlike normal children born in general. Stunting condition is only seen after the baby is 2 years old. The definition of stunting according to the decision of the Minister of Health in 2010 is nutritional status based on the index of body length for age (PB/U) or height for age (TB/U) in the standard for assessing children's nutritional status with measurement results that are in the standard value or z-score < -2 SD to -3 SD for short (stunted) and < -3 SD for very short (severely stunted).

According to Eko (2018), in the village pocket book, stunting is handled. Stunting is a condition of failure to thrive in children under five due to chronic malnutrition so that children are too short for their age. Stunting is caused by multi-dimensional factors. The most decisive intervention is at 1,000 HPK (1000 days) from the first birth.

Stunting is often described as a poor nutritional status and is chronic in development from early life. This condition is represented by a z-score for height for age (TB/U) less than -2 standard deviations (SD) based on growth standards according to WHO (WHO, 2010).

Factors for stunting or stunting are factors of social status, economy, food intake, infection, maternal nutritional status, infectious diseases and micronutri-

ent deficiencies and the environment (WHO, 2018). Many factors can cause stunting in toddlers including the nutritional status of mothers during pregnancy, so it is necessary to have adequate nutrition during pregnancy as needed to avoid the risk of stunting and as for other reasons, including a mother's knowledge of the problem of balanced nutrition, which is very lacking, but sometimes the environment is also one of the causes because if sanitation and hygiene are poor it will affect nutrition.

In 2017, more than half of children with stunting came from Asia as much as 55%, Africa is 39% and Indonesia occupies the top 5 highest prevalence with stunting. In Indonesia, stunting has the highest prevalence compared to other problems such as malnutrition, thinness, and obesity with stunting prevalence increased from 2016 which was 27.5% to 29.6% stunting in 2017, which tended to be static (Moh, 2018).

Pregnant women are a group that is vulnerable to nutritional problems. Lack of nutrition for pregnant women has a very large impact on the child they are carrying. If pregnant women experience nutritional problems, it will cause, among others: miscarriage, stillbirth, neonatal death, congenital defects, anemia in infants, and infants born with LBW.

The nutrition obtained by pregnant women before and during pregnancy affects the growth and development of the baby in the womb. If the nutrients needed by pregnant women are fulfilled before and during pregnancy, they will give birth to healthy babies.

A pregnant woman will give birth to a healthy baby if the level of health and nutrition is in a good position, but until now there are still many pregnant women who experience nutritional problems, especially malnutrition such as Chronic Energy Deficiency (KEK) and nutritional anemia (Depkes RI, 1996). The results of the 1996 SKRT show that 41% of pregnant women suffer from CED and 51% who suffer from anemia have a tendency to give birth to babies with

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low birth weight (LBW).

Chronic energy deficiency (CED) is a state of malnutrition where the condition of the mother suffers from chronic food shortages which result in health problems for the mother in relative or absolute terms of one or more nutrients (Helena, 2013).

Pregnant women who experience CED and anemia are at risk of experiencing greater pain, especially in the third trimester of pregnancy than mothers who are normal pregnant. Babies who are born with low birth weight will have an effect on their growth and development period, so they will be at risk when they are adults. The risk of morbidity and mortality in infants is they will get susceptible to lower respiratory tract infections, learning disorders, behavioral problems, and so on (Depkes RI, 1998).

The nutritional needs of mothers during pregnancy are different, therefore WHO recommends an additional amount of 150 Kcal a day in the first trimester, 350 Kcal a day in the second and third trimesters. In Canada, the addition for the first trimester is 100 Kcal and 300 Kcal for the second and third trimesters. Indonesia based on the Widya Karya National Food and Nutrition VI year 1998, the figure was determined to be 285 Kcal per day during pregnancy. This figure certainly does not include additions due to changes in room temperature, physical activity, and growth.

Supervision issues for mothers during pregnancy are very necessary, because we have to monitor what foods are eaten by pregnant women so that their nutrition is fulfilled, through this supervision can be determined such as maternal health during pregnancy, how to make pregnant women aware of nutritional problems such as conducting education on nutrition for pregnant women. In Aceh Jaya, A Nutrition House (RGG) has also been established to provide understanding to mothers who are pregnant and who have toddlers about nutritional problems.

Pregnant women need to maintain the food they assume during pregnancy, such as foods rich in protein, fat, calcium, calories which are often found in tempeh, tofu, vegetables, fruits, and nuts. 23.5cm while the KEK LILA is 23.5cm. The problem of supervision for mothers during pregnancy is very necessary, because we have to monitor what foods

are eaten by pregnant women so that their nutrition is fulfilled.

Growth parameters continue to be a concern and are considered as parameters for assessing nutritional health status. The parameters that are often used are weight and height or body length (Sediaoethema, 2012). Births with Low Birth Weight (LBW) represent more than 20 million births every year with an estimated 15% -20% of births worldwide which is still a global health problem (WHO, 2014).

To prevent all of this from happening, efforts are made such as regulating food consumption in pregnant women, monitoring weight gain once a week or once a month, checking HB levels, and measuring LILA before or during pregnancy.

2 | METHOD

The method used is a quantitative method through a cross-sectional approach. According to Arikunto (2006) quantitative method is a research approach that uses a lot of numbers ranging from data collection, interpretation of the data obtained, and exposure of the results of pregnancy and maternal characteristics during pregnancy on the incidence of stunting. Cross-sectional research is a study to study the dynamics of the correlation between risk factors and effects, by approach, observation, or data collection. Cross-sectional research only observes once and measurements are made on the subject variables at the time of the study (Notoatmojo, 2010). The population in this study was 23 toddlers aged 24-60 years old in the working area of the Lageun Public Health Center, especially in the village of Lhok Bot.

3 | RESEARCH OBJECTIVE

The purpose of this study was to determine whether there was a relationship between health services for pregnant women and the incidence of stunting and the relationship between maternal nutritional status during pregnancy and the incidence of stunting in the working area of the Lageun Public Health Center, Setia Bakti District, Aceh Jaya Regency.

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4 | RESULTS AND DISCUSSION

- General data
- Toddler age

Table 1. Distribution of Respondents by age under five in the work area of the Lageun Public Health Center.

Age (months)	Number (toddlers)	Percentage
24-36 months	9	39,13%
36-48 months	11	47,83%
48-60 months	3	13,04%
total	23	100,00%

Table 1 shows 9 toddlers aged 24-36 (39.13%), and 11 toddlers aged 36-48 (47.48%) and 3 (13.04%).

2. Gender

Table 2 Distribution of respondents based on gender of children under five in the Lageun Health Center Work Area.

Gender	Number (toddlers)	Percentage
Man	13	56,52%
Woman	10	43,48%
Amount	23	100,00%

Table 2 shows that there are more male children under five than male children, namely 13 children under five (56.52%) and 10 female children under five (43.48%).

- Special Data

1. Maternal nutritional status during pregnancy

Table 3. Distribution of respondents based on the nutritional status of mothers during pregnancy in the Lageun Health Center work area.

LILA	Amount	Percentage
KEK	4	17,39%
NORMAL	19	82,61%
Total	23	100,00%

Table 3. shows that mothers with LILA (Upper Arm Circumference) are 19 people (82.61%) while for mothers with KEK (Chronic Energy Deficiency) 4 people (17.39%)

Respondents who are at risk of giving birth to mal-nourished babies are 4 people while respondents who are not at risk of stunting are 19 people. However, there are also respondents who experience SEZ but when giving birth the baby is not stunted, because there are also mothers whose LILA who is normal but she gave birth babies who are stunted, because we can see from the results of this study that only 4 mothers have SEZ while 5 stunted children, so there are stunting children but the mother's LILA is normal. Normal LILA >23.5cm.

2. Stunting Incident

Table 4. Distribution of respondents based on the incidence of stunting in children under five in the working area of the Lageun Health Center.

Stunting Incident	Amount	percentage
Stunting	5	27,78%
Normal	18	78,26%
Total	23	106,04%

Table 4 shows that the normal number of toddlers is 18 toddlers (27.78%) while the stunting toddlers are 5 toddlers (78.26%).

There are 5 respondents who are at risk of stunting in Lhok Bot village, while 18 people are not at risk.

3. The relationship between maternal nutrition during pregnancy and the incidence of stunting in children under five in the work area of the Lageun Public Health Center.

Independent Variable	Dependent Variable	P-Value	Mark r
Maternal nutritional status during pregnancy (LILA)	stunting incident	0.001	12.308

Based on the table data above, this study used the chi-square test from the calculation, it got a p Value of 0.001 which means ($p < 0.01$), therefore there is a relationship between the nutritional status of the mother during pregnancy and the occurrence of stunting in infants/toddlers to be born. From the r value, it is known that 12,308 which means that the strength in the relationship is categorized as weak. The less nutrition of the mother during pregnancy, the greater the incidence of stunting in a child to be born.

4. Relationship between health services for pregnant women and the incidence of stunting in the work area of the Lageun Public Health Center.

Independent variable	Dependent variable	Frequency		Total	p-value
		There is	there is not any		
Ante Christmas care	stunting incident	16	7	23	0.095
Administration of blood-added tablets (fe)	stunting incident	9	15	23	0.002
Pregnant women class	stunting incident	19	4	23	0.246
Nutrition monitoring	stunting incident	10	13	23	0.004
Who owns a family latrine	stunting incident	21	2	23	0.435
Safe drinking water	stunting incident	20	3	23	0.590
Health guarantee	stunting incident	21	2	23	0.435

Based on the table data above, it is known that the results of the analysis using the chi-square test found the relationship between Ante Natal Care and the incidence of stunting in toddlers, the p-value = 0.095 ($p > 0.05$) therefore there was no relationship between ANC and stunting. In infants/toddlers. Meanwhile, the relationship between giving blood-added tablets and the incidence of stunting was found to be p-value = 0.002 ($p < 0.05$), therefore there was a relationship between giving blood-added tablets (fe) and the incidence of stunting with the incidence of stunting, p-value = 0.246 ($p > 0.05$) then there is no relationship between the class of pregnant women and the incidence of stunting. There is a relationship between nutritional monitoring and the incidence of stunting. The relationship between pregnant women who have latrines and the incidence of stunting obtained p-value = 0.435 ($p > 0.05$), so there is no relationship between pregnant women who have latrines and the incidence of stunting. The relationship between pregnant women who have safe drinking water and the incidence of stunting is found to be p-value = 0.590 ($p > 0.05$), so there is no relationship between pregnant women who have safe drinking water and the incidence of stunting. Health insurance with stunting is obtained with a p-value = 0.435 ($p > 0.05$), so there is no relationship between pregnant women who have health insurance and the incidence of stunting.

ANC services are preventive or preventive services to monitor maternal health and prevent complications for the mother and fetus. Efforts must be made to ensure that pregnant women are healthy until delivery, if any physical or psychological abnormalities can be detected immediately, and pregnant women can giving birth without complications (Bartini, 2012). Ante Natal Care (ANC) examination is very necessary which aims to optimize the mental, physical health of the mother and baby return of normal reproductive health (Manuaba, 1998).

The Ministry of Health recommends that pregnant women consume at least 90 iron tablets during pregnancy. However, the level of compliance of pregnant women in consuming Fe tablets is still low. Therefore, the incidence of stunting is related to pregnant women who do not take Fe tablets.

The class for pregnant women is one way that can be used to disseminate information related to nutri-

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tion and health during pregnancy. From the results obtained, it can be concluded that there is no relationship between classes of pregnant women in Lhok Bot village and the incidence of stunting because there is no class of pregnant women in the village.

Nutrition monitoring is very influential on the occurrence of stunting, therefore it is necessary to monitor nutrition for pregnant women in order to prevent stunting. This nutrition monitoring can be through *Posyandu* or other education.

According to the Association of Indonesian Environmental Health Experts (HAKLI) environmental health is an environmental condition that is able to support a dynamic ecological balance between humans and the environment to support the achievement of a healthy and happy quality of human life residents who have latrines. Clean water is clean water used for daily needs whose quality meets health requirements and can be drunk when it has been cooked. There is no relationship between safe clean water and the incidence of stunting because almost all of these villages have safe water for consumption.

Several studies show that health insurance participation is able to improve nutritional problems. However, the results obtained through the chi-square test show that in Lhok Bot village there is no relationship with families who have health insurance with stunting.

From 23 samples of pregnant women in the village of Lhok Bot loyal filial piety, several of them who suffered from constipation from the data obtained were 4 people (17.13%). A person's background is one of the important elements that can affect health and nutrition because health problems often occur due to lack of knowledge or lack of information about health and good nutrition issues.

Pregnant women whose LILA is SEZ will be vulnerable to giving birth to stunting babies, because of the lack of nutrition that they get when they are pregnant, so that they are not sufficient for the needs of the baby in their womb.

In Aceh Province, the prevalence of SEZ risk for pregnant women aged 15-15 years who are pregnant is 20% while the prevalence of SEZ risk for women of childbearing age (not pregnant). Nationally, the

risk of SEZ in WUS is 21% (Aceh Health Profile, 2019)

The occurrence of stunting is caused by a process of failure to achieve potential linear growth due to health status and nutritional status. Linear growth or often called height is influenced by genetic factors, hygiene and sanitation factors and medical conditions, but there are also nutritional problems as mentioned above on.

The implementation of health services is a shared responsibility between the government and the community, most of them can be carried out by public health center, none other than the Lageun Setia bakti puskesmas. One of the efforts to improve the performance of Public health center services is by implementing health MSS.

5 | CONCLUSION

Based on the results of research that has been carried out: 1) Lack of health services for pregnant women can also cause stunting, 2) The risk that causes stunting in infants is greater due to mothers who experience SEZ during pregnancy because it is very closely related to stunting compared to normal mothers who experience seizures but do not give birth to stunting babies, 3) The status of pregnant women with SEZ in the Lageun Community Health Center working Area is in the Medium Category 4) The health services can also be related to the incidence of stunting

6 | SUGGESTION

Based on the results of the research above, suggestions that can be conveyed to the public health center workers so that they can provide education to pregnant women/communities in Lhok Bot village to be able to improve health services for pregnant women and provide nutritious and balanced food to avoid stunting.

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