The 5th Mitra Husada Health International Conference (MiHHICo) 2025
Volume 5 (2025) ISSN: 2988-3768

# THE RELATIONSHIP BETWEEN NUTRITIONAL STATUS AND WEIGHT GAIN OF PREGNANT WOMEN AT RUNDENG PUBLIC HEALTH CENTER SUBULUSSALAM CITY IN 2025

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***ABSTRACT***

Nutritional status is a person's body condition that can be seen from the food consumed by the person while the nutritional status of pregnant women is the condition of the pregnant woman's body from consuming food and substances for survival. The purpose of this study is to determine "The Relationship Between Nutritional Status and Weight Gain of Pregnant Women at the Rundeng Health Center, Subulussalam City in 2025". Data obtained from Rundeng Village, Rundeng District, Subulussalam City in 2025 showed that the number of pregnant women was 45 people.

This study used correlational analytic methods with a cross-sectional approach using primary data. The population consisted of 45 pregnant women, and the sampling technique was total sampling. The study used a LiLA tape and a weight scale as measuring instruments.

Based on the results of the study after conducting a statistical test using the Chi-Square Test with a 95% confidence level on df 1 and the results of the statistical test calculations obtained p value = 0.000, so that the p value <0.05 so that it can be concluded that there is a relationship between nutritional status and weight gain of pregnant women at the Rundeng Health Center, Subulussalam City in 2025.

It is hoped that health workers can provide information about the benefits of conducting ANC regularly and routinely in subsequent pregnancies, as well as providing information to mothers to maintain the condition of subsequent pregnancies so that they remain healthy and maintain normal eating patterns.

**Keywords: Nutritional Status, Weight Gain**

## Introduction

According to the World Health Organization (WHO), the incidence of malnutrition in pregnant women ranges from 20-48%, with the finding of pregnant women experiencing malnutrition. Achieving a good quality of life for families and communities is largely determined by the health of mothers and children. Pregnant women are one of the groups vulnerable to nutritional problems. KEK (Chronic Energy Deficiency) in pregnancy globally is 35-75%, which is significantly higher in the third trimester compared to the first and second trimesters of pregnancy.

The proportion of pregnant women whose Upper Arm Circumference (LILA) was measured using a LiLA tape with a measurement result of less than 23.5 cm to the number of pregnant women whose LiLA was measured in a certain period multiplied by 100%. The results of the 2017 nutritional status monitoring survey (PSG) showed that the percentage of pregnant women at risk of KEK was 14.8%, which is lower than the percentage last year and the target that has been set. These results are a picture of the nutritional status of pregnant women that is in accordance with expectations (Ministry of Health of the Republic of Indonesia, 2017).

Nutritional Status of Pregnant Women Based on LiLA Based on the Chronic Energy Deficiency indicator in pregnant women by measuring the Upper Arm Circumference (LLA), the results obtained were 8.7% at risk of suffering from Chronic Energy Deficiency (CED). This condition when compared with the results of the 2016 PSG showed an increase of 0.6%. The districts with the highest proportion of CED in pregnant women were Simeulue (16.5%) and Central Aceh (13.9%), while the lowest were in Aceh Singkil (3.6%) and Aceh Tamiang (4.4%) (Aceh Health Office, 2019).

Percentage of pregnant women at risk of Chronic Energy Deficiency (CED) in Aceh 2013-2017. Simeulue (16.5%), Aceh Singkil (3.6%), South Aceh, (9.7%), Southeast Aceh (12.5%), East Aceh (11.7%), Central Aceh (5.3%), West Aceh (5.3%), Aceh Besar (10.3%), Pidie (10.4%), Bireuen (11.2%), North Aceh (5.7%), Southwest Aceh (10.4%), Gayo Lues (6.9%), Aceh Tamiang (4.4%), Nagan Raya (8.3%), Aceh Jaya (7.1%), Bener Meriah (8.1%), Pidie Jaya (5.4%), Banda Aceh City (4.7%), Sabang City (5.3%), Langsa City (7.3%), Lhokseumawe City (10.6%), Subulussalam City (5.5%), ACEH (8.7%) (Aceh Health Office, 2019). In Subulussalam City, the increase in maternal mortality in 2015 was 68.5 people per 100,000 live births, when compared to 2016 there was an increase of 257 per 100,000 live births, there was a decrease again in 2015 of 162 people per 100,000 and an increase in 2020 of 210 per 100,000 live births, the sub-district that contributed the most to maternal deaths in Simpang Kiri Sub-district with 3 maternal deaths (Subulussalam City Health Profile, 2024).

## Research Method

The type of research used in this study is correlational analytic because this study seeks the relationship between two variables which will then be sought for the correlation coefficient. This research was conducted at the Rundeng Community

Health Center, Rundeng District, Subulussalam City. The time of this research was carried out in April-July 2025. The population in this study was 45 pregnant women by Total Sampling. Data processing was carried out using Univariate and Bivariate Analys.

**Result**

**Univariate Analysis**

**Table 1. Frequency Distribution of Nutritional Status in Pregnant Women at Rundeng Health Center, Subulussalam City in 2025**

| Nu | Nutritional Status | f | % |
|---|---|---|---|
| 1 | <23,5 cm | 3 | 6.67 |
| 2 | >23,5 cm | 42 | 93.33 |
| | **Total** | **45** | **100** |

Based on Table 1. It shows that the nutritional status of pregnant women <23.5 cm was 3 people (6.67%) and those >23.5 cm were 42 people (93.33%) at the Rundeng Health Center, Subulussalam City in 2025.

**Table 2. Frequency Distribution of Weight Gain in Pregnant Women at Rundeng Health Center, Subulussalam City in 2025**

| Nu | Weight | f | % |
|---|---|---|---|
| 1 | >20 kg | 3 | 6.67 |
| 2 | <20 kg | 42 | 93.33 |
| | **Total** | **45** | **100** |

Based on Table 2. It shows that the increase in weight of pregnant women > 20 kg was 6.67% and <20 kg was 42 people (93.33%) at the Rundeng Health Center in 2025.

**Bivariate Analysis**

**Table 3. Distribution of the Relationship Between Nutritional Status and Weight Gain in Pregnant Women at the Rundeng Community Health Center, Subulussalam City in 2025**

| Nu | Nutritional Status | Weight | | | | Amount | | p value |
|---|---|---|---|---|---|---|---|---|
| | | >20 kg | | <20 kg | | | | |
| | | f | % | F | % | f | % | |
| 1 | >23,5 cm | 42 | 100 | 0 | 0.00 | 42 | 100 | 0,000 |
| 2 | <23,5 cm | 0 | 0.00 | 3 | 100 | 3 | 100 | |
| | **Total** | **42** | **100** | **3** | **100** | **45** | **100** | |

Based on table 3. obtained from cross tabulation between the relationship between nutritional status and weight gain in pregnant women shows that nutritional status >23.5 cm and weight >20 kg as many as 42 people (100%), nutritional status >23.5 cm and weight <20 kg as many as 0 people (0.00%). Nutritional status <23.5 cm and weight >20 kg as many as 0 people (0.00%), and nutritional status <23.5 cm and weight <20 kg as many as 3 people (100%).

After conducting a statistical test using the Chi-Square test with a 95% confidence level on df 1 and the results of the statistical test calculations obtained a p value = 0.00, so that the p value <0.05, it can be concluded that there is a relationship between nutritional status and weight gain in pregnant women at the Rundeng Health Center, Subulussalam City in 2025.

**Discussion**

**Nutritional Status in Pregnant Women**

Based on Table 4.1, the results of the research conducted show that of the 45 respondents, the nutritional status of pregnant women was <23.5 cm for 42 people (93.33%), and the nutritional status of pregnant women was >23.5 cm for 3 people (6.67%).

Based on the results of research conducted by Sukmawati at the Bontoa Community Health Center, Maros Regency, it was shown that of the 95 respondents for the Maternal Nutritional Status category based on LILA, 27 people (28.4%) experienced KEK nutritional status and 68 people (71.6%) mothers had normal nutritional status.

Based on the results of research conducted by Diza Fathamira Hamzah at the Langsa City Community Health Center, it was found that as many as 29 people (69.0%) of pregnant women in the Langsa City Community Health Center work area experienced chronic energy deficiency (CED) which was characterized by an upper arm circumference of less than 23.5 cm.

Nutritional status is the condition of the body which is the end result of the balance between nutrients entering the body and their use.

Maternal nutrition plays an important role in reducing maternal morbidity and mortality rates, therefore nutritional preparation for pregnant women should be carried out even before pregnancy.

According to researchers' assumptions, the nutritional status of pregnant women is a very important factor in determining the nutritional status of newborn babies. The nutritional adequacy of pregnant women is determined by the mother's weight gain, which will also support the increase in fetal weight. The normal nutritional status of pregnant women is >23.5 cm. If the LiLA is below 23.5 cm, the pregnant woman is experiencing KEK.

**Weight Gain in Pregnant Women**

Based on Table 4.2, the results of the research conducted show that of the 45 respondents, the increase in weight of pregnant women was <20 kg in 42 people (93.33%) and >20 kg in 3 people (6.67%).

Based on research by Firdaus, which showed that of the 128 pregnant women studied for their weight gain during pregnancy, 71 (55.5%) experienced weight gain that was insufficient or did not meet the Institute of Medicine (IOM) recommendations. Meanwhile, 39 (30.4%) experienced weight gain that met the recommended ideal weight, and 18 (14.1%) experienced excess weight gain during pregnancy.

Based on the results of research conducted by Eka Nurhayati in the Sewon Bantul Yogyakarta Health Center work area, it showed that most respondents, namely 44 people (62%) experienced

weight gain according to recommendations. While the remaining 27 people (38%) experienced weight gain that was not according to recommendations.

**The Relationship Between Nutritional Status and Weight Gain in Pregnant Women**

After conducting a statistical test using the Chi-Square test with a 95% confidence level on df 1 and the results of the statistical test calculations obtained a p value = 0.00, so that the p value <0.05, it can be concluded that there is a relationship between nutritional status and weight gain in pregnant women at the Rundeng Health Center, Subulussalam City in 2025.

Harti's research shows that maternal weight gain during pregnancy indicates the mother's adaptation to fetal growth and the accumulation of excess body fat. The normal range for maternal weight gain depends on the woman's pre-pregnancy body mass index (BMI).

The test results showed a significant relationship between nutritional status and maternal weight gain. This study aligns with Irawati's research, which found that pre-pregnancy body mass index and energy and protein consumption were the factors influencing weight gain during pregnancy. The analysis revealed that the most influential factor influencing weight gain during pregnancy (trimesters 1-3) was maternal body mass index at the beginning of pregnancy. Pregnant women who begin their pregnancy with low nutritional status should consume at least adequate energy and nutrients to achieve adequate weight gain during pregnancy.

The Pearson statistical test results indicate a correlation between nutritional status and maternal weight gain during pregnancy (p = 0.008 and r = -0.311). This means that if nutritional status is low or poor in early pregnancy, weight gain is greater. However, the correlation indicates a weak negative relationship between nutritional status and maternal weight gain.

According to researchers, there is a relationship between nutritional status and weight gain in pregnant women. This is because maternal nutritional adequacy is determined by maternal weight gain, which in turn supports fetal weight gain.

**Conclusion and Suggestion**

After conducting research on the Relationship between Nutritional Status and Weight Gain at the Rundeng Community Health Center in Subulussalam City in 2025, the results of the study can be concluded that of the 45 respondents, the nutritional status of pregnant women <23.5 cm was 42 people (93.33%), the nutritional status of pregnant women >23.5 cm was 3 people (6.67%).

While the results of the Statistical Test using chi-square with a 95% confidence level on df 1, obtained a p value of 0.00 <0.05. So the results of the study can be concluded that from 45 respondents, the nutritional status of pregnant women <23.5 cm was 42 people (93.33%), the nutritional status of pregnant women> 23.5 cm was 3 people (6.67%), the weight gain of pregnant women <20 kg was 42 people (93.33%) and those> 20 kg were 3 people (6.67%). It is recommended to maintain a diet so that the mother's nutrition is good during pregnancy and experiences sufficient weight gain.

**References**

Dinkes Aceh, 2019 file:///C:/Users/acer/Downloads/01_Aceh_2019-1%20(1).pdf.

Kemenkes RI, 2017.file:///C:/Users/acer/Downloads/Laporan-Kinerja-Ditjen-KesmasTahun-2017_edit-29-jan-18_1025%20(2).pdf

Profil Kesehatan Kota Subulussalam, 2024. file:///C:/Users/acer/Downloads/1175_Aceh_Kota_Subulussalam_2016%20(4).

Sukmawati, (2018). 265332-status-gizi-ibu-saat-hamil-berat-badan-l-8054beb3[1].pdf

Harti, (2016) Hubungan_Status_Gizi_dan_Pola_Makan_terhadap_Penam[1].pdf

Notoatmodjo. (2017**).** Metodologi Penelitian Kesehatan. Jakarta: PT Rinika Cipta.

Wijayanti. (2019). Pola Makan Ibu Hamil Yang Mempengaruhi Kejadian KEK Di Puskesmas Gabus I Kabupaten Pati. File://C:/Users/acer/Downloads/226-881-1-PB.pdf*Sekolah Tinggi Ilmu Kesehatan Bakti Utama Pati.*