

## RELATIONSHIP ANALYSIS OF CONSUMPTION PATTERNS AND AVOID CULTURE FOOD ON NUTRITIONAL STATUS OF PREGNANT MOTHERS IN ACEH BARAT DISTRICT

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### Abstrak

Status gizi ibu hamil merupakan suatu hal yang harus diperhatikan karena dapat mempengaruhi kesehatan ibu dan bayi bahkan dapat menyebabkan kematian pada ibu dan bayi. Namun terdapat beberapa permasalahan terkait pola konsumsi dan budaya pantang makanan yang ada di masyarakat. Dengan demikian masalah yang diangkat dalam penelitian ini adalah belum diketahuinya hubungan pola konsumsi dan budaya pantang makanan terhadap status gizi ibu hamil di Kabupaten Aceh Barat. Tujuan penelitian ini untuk mengetahui hubungan pola konsumsi makanan dan budaya pantang makanan terhadap status gizi ibu hamil di Kabupaten Aceh Barat. Penelitian ini termasuk jenis penelitian gabungan antara kuantitatif dan kualitatif dengan pendekatan *cross sectional study*. Sampel dalam penelitian ini sebanyak 342 ibu hamil. Teknik pengambilan sampel dilakukan dengan menggunakan rumus Slovin. Pengumpulan data dilakukan dengan menggunakan kuisioner dan wawancara, sedangkan uji statistik yang digunakan adalah regresi logistik menggunakan *stata*. Hasil penelitian menunjukkan secara parsial (sebagian) adanya hubungan antara pola konsumsi makanan dengan status gizi ibu hamil di Kabupaten Aceh Barat ( $p$ -value = 0,001), antara budaya pantang makanan dengan status gizi ibu hamil di Kabupaten Aceh Barat ( $p$ -value = 0,005), antara pendapatan keluarga dengan status gizi ibu hamil di Kabupaten Aceh Barat ( $p$ -value = 0,002) dan adanya hubungan antara pendapatan keluarga, pola konsumsi makanan dan budaya pantang makanan secara bersamaan terhadap status gizi ibu hamil di Kabupaten Aceh Barat ( $p$ -value di bawah 0,05). Disarankan bagi pihak Puskesmas untuk terus melakukan peningkatan pelayanan konseling gizi kepada ibu hamil, sehingga gizi ibu hamil dapat terpenuhi dan kepada Ibu hamil harus senantiasa memperhatikan pola konsumsi.

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### Abstract

The nutritional status of pregnant women is something that must be considered because it can affect the health of the mother and baby and can even cause death for the mother and baby. However, there are several problems related to consumption patterns and the culture of abstinence from food in the community. Thus, the problem raised in this study is the unknown relationship between consumption patterns and food abstinence culture on the nutritional status of pregnant women in West Aceh Regency. The purpose of this study was to determine the relationship between food consumption patterns and food abstinence culture on the nutritional status of pregnant women in Aceh Barat Regency. This research is a combination of quantitative and qualitative research with a cross sectional study approach. The sample in this study were 342 pregnant women. The sampling technique was carried out using the Slovin formula. Data was collected using questionnaires and interviews, while the statistical test used was logistic regression using *stata*. The results showed that partially (partially) there was a relationship between food

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consumption patterns and the nutritional status of pregnant women in Aceh Barat District (p-value = 0.001), between food abstinence culture and nutritional status of pregnant women in West Aceh District (p-value = 0.005), between family income and the nutritional status of pregnant women in Aceh Barat Regency (p-value = 0.002) and there is a relationship between family income, food consumption patterns and the culture of food abstinence simultaneously on the nutritional status of pregnant women in Aceh Barat Regency (p-value below 0.05). It is recommended for the Puskesmas to continue to improve nutritional counseling services for pregnant women, so that the nutrition of pregnant women can be fulfilled and pregnant women must always pay attention to consumption patterns.

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## INTRODUCTION

Maternal health efforts can be seen from the Maternal Mortality Rate indicator (1). AKI is the number of maternal deaths during pregnancy, childbirth and the puerperium caused by pregnancy, childbirth, and postpartum or their management but not due to other causes such as accidents or falls in every 100,000 live births (2). Maternal mortality and maternal morbidity and mortality have long been a health problem, especially in developing countries. About 25-50% of women's deaths of childbearing age are caused by things related to pregnancy and childbirth. Death during childbirth is the main factor in the death of women at the peak of their productivity (3).

One of the efforts that can be done in reducing maternal mortality is to increase the fulfillment of nutrition for pregnant women. Success in fulfilling nutrition for pregnant women is measured by their nutritional status. Nutrition for pregnant women is a nutrient that is needed in large quantities for the fulfillment of the mother's own nutrition and the development of the fetus she contains. Food needs are seen not only in the portion eaten but must be determined on the quality of the nutrients contained in the food consumed. The nutritional status of pregnant women is one of the indicators in measuring the nutritional status of the community (4). The energy needed by pregnant women is  $\pm 80,000$  kcal for 9

months of pregnancy to be able to give birth to a healthy baby (5).

If the nutritional intake of pregnant women is not balanced with the body's needs, it will cause nutritional deficiencies (1). Chronic Energy Deficiency (KEK) can cause anemia during pregnancy which in turn can cause health problems and even lead to death (6). Based on the results of Riskesdas, the proportion of anemia in pregnant women in Indonesia in 2018 increased to 48.9% (7).

In Indonesia, the Maternal Mortality Rate (Zaki) in 2018 was 4,226 and in 2019 it was 4,221. Based on the 2017 PSG, the percentage of pregnant women in Indonesia with a risk of CED is 14.8% (7). According to data from the Directorate General of Public Health as of March 27, 2020, the number of infant deaths in Indonesia was 20,244 cases with infant mortality due to low birth weight (LBW) of 7,150 cases (7).

Aceh Province is the westernmost province of the Republic of Indonesia with a population of 5,189,446 people in 2017 (BPS, 2018). Based on data from the health profile of Aceh province in 2019, the number of pregnant women was 126,964 people, the number of maternal deaths was 26 people, the number of maternal deaths was 40 people, the number of postpartum maternal deaths was 91 people, it can be concluded that the number of maternal deaths was 157 people. The district that experienced the

most maternal deaths was North Aceh with 25 people, the postpartum maternal mortality rate 17 people, the deaths from pregnant women 5 people and maternal deaths 3 people. Furthermore, Bireun district with 16 maternal deaths consisting of 14 maternal deaths and 1 death for pregnant women and 1 for post-partum mothers. While the south west region of mortality is the highest maternal mortality rate in Nagan highway with the number of deaths mother 10 souls which consists of mortality maternal postpartum 8 people, mother maternity pregnant one soul and one soul. Then followed by South Aceh with 10 souls and West Aceh with 8 souls.

Many factors cause maternal and infant mortality, including the age of the mother who is too young and too old, the level of education, occupation and wrong food consumption patterns. Consumption patterns are something that must be considered in order to reduce the Maternal Mortality Rate (MMR) and also the Infant Mortality Rate (IMR). Pregnancy is a time when a woman requires a variety of nutritional elements that are more than what is needed in normal circumstances (8). Basically, pregnant women need additional nutrients for the growth of the fetus, placenta and other organs or tissues. Pregnant women require additional energy of an average of 200 kcal per day. For this reason, pregnant women must increase their food intake

to meet nutritional needs. In addition, pregnant women must apply good consumption patterns so that their nutritional needs during pregnancy are met and avoid the risk of malnutrition. But if there is a taboo on a food, it will greatly affect the nutritional balance. The purpose of this study was to determine the relationship between food consumption patterns and food abstinence culture on the nutritional status of pregnant women in Aceh Barat Regency.

### RESEARCH METHODOLOGY

This research is a combination of quantitative and qualitative research with a *cross sectional study approach*. This research was carried out at the Johan Pahlawan Health Center, Meureubo Health Center and Peureumeu Health Center, West Aceh Regency. The sample in this study were 342 pregnant women. The sampling technique was carried out using the Slovin formula. Data was collected using questionnaires and interviews, while the statistical test used was logistic regression using *stata*.

### RESEARCH RESULT

The results of research on the nutritional status of pregnant women in West Aceh District were obtained through quantitative research methods.

**Table 1 Socio-Demographic Frequency Distribution of Pregnant Women in Aceh Barat District**

No	Characteristics	Frequency (n)	%
1	Age at Risk	104	30.41
	No risk	238	69.59
2	Education Level : No	115	33.63
	School/SD SMP/SMA	182	53.22
	Diploma/S1/S2/S3	45	13.16

3	Family Income : (Husband and Wife)		
	< Rp. 3,165,031	196	57.31
	Rp. 3,165,031	146	42.69
4	Mother's Occupation:		
	Not working	198	57.89
	Work	144	42.11

Source: Primary data processed in 2021

Table 1 shows that the sociodemographic age respondents obtained were at risk as many as 104 people (30.41%) and 238 people (69.59%), not at risk, meaning that the majority of respondents had no risk age. The optimal age for pregnancy is between 20 and 30 years. The age range of 20-35 years is the most appropriate time to experience pregnancy because the mother's body is in the healthiest and safest condition for pregnancy and childbirth. Characteristics of respondents based on the characteristics of the level of education obtained were not in school/SD as many as 115 people (33.63%), SMP/SMA as many as 182 people (53.22%) and Diploma/S1/S2/S3 as many as 45 people (13.16%), meaning that the majority of respondents have a junior/high school education. Characteristics of respondents' family income obtained < Rp. 3,165,031 as many as 196 people (57.31%) and Rp. 3,165,031 as many as 146 people (42.69%), meaning that the majority of respondents have incomes below the minimum wage. Characteristics of respondents based on mother's occupation obtained as many as 198 people (57.89%) do not work and work as many as 144 people (42.11%), meaning that the majority of respondents do not work.

**Table 2 Frequency Distribution of Food Consumption Patterns for Pregnant Women in Aceh Barat District**

No	Food Consumption Pattern	Frequency (n)	%
1	It is not in accordance with	265	77.49
2	In accordance	77	22.51

Source: Primary data processed in 2021

Based on Table 2, it is known that the food consumption patterns of pregnant women in West Aceh Regency were generally found to be inappropriate as many as 265 people (77.49%). The food consumption pattern of pregnant women in Aceh Barat Regency is classified as inappropriate. This pattern is caused because in general pregnant women in Aceh Barat Regency do not have good knowledge about the health of the mother and the child they are carrying.

**Table 3 Distribution of Abstinence Culture for Pregnant Women in West Aceh District**

No	Food Abstinence Culture	Frequency (n)	%
1	There is	130	38.01
2	There is not any	212	61.99

Source: Primary data processed in 2021

The picture of the culture of abstinence from food can be seen in Table

3, it was found that generally pregnant women in Aceh Barat District did not have a culture of abstinence from food, namely 212 people (61.99%).

**Table 4 Distribution of the Nutritional Status of Pregnant Women in Aceh Barat District**

No	Nutritional status	Frequency (n)	%
1	KEK	113	33.04
2	No KEK	229	66.96

Source: Primary data processed in 2021

The description of the nutritional status of pregnant women can be seen in Table 4, it is found that generally pregnant women in Aceh Barat Regency are not SEZ, namely 229 people (66.96%). This means that the nutritional status of

pregnant women in Aceh Barat is mostly good.

**Table 5 Relationship between consumption patterns and nutritional status of pregnant women in Aceh Barat district**

No	Food Consumption Pattern	Nutritional status		Total	P-Value	OR (95% CI)
		KEK	No KEK			
1	In accordance	2	75	77	0.00	27.03 (6,499 – 112,418)
2	Not Suitable	111	154	265		
Total		113	229	342		

Source: Primary data processed in 2021

The results of the analysis show that there is a relationship between consumption patterns and the nutritional status of pregnant women in Aceh Barat Regency because  $p\text{-value} = 0.00$ . This means that there is a significant relationship between consumption patterns and the nutritional status of pregnant women. From the calculation of the Odds

Ratio, the OR value is 27.03 or  $OR > 1$ , this shows that pregnant women with appropriate consumption patterns have 27.03 times less likely to experience CED compared to pregnant women with inappropriate consumption patterns.

**Table 6 Relationship between Food Abstinence Culture and Nutritional Status of Pregnant Women in Aceh Barat District**

No	Food Abstinence Culture	Nutritional status		Total	P-Value	OR (95% CI)
		KEK	No KEK			
1	There is not any	58	154	212	0.005	1.95 (1,228 – 3,087)
2	There is	55	75	130		
Total		113	229	342		

Source: Primary data processed in 2021

The results of the analysis show that there is a relationship between the culture of abstinence from food and the nutritional status of pregnant women in Aceh Barat Regency because p-value = 0.005. This means that the presence or absence of a culture of abstinence is a determining factor in the nutritional status

of pregnant women. From the Odds Ratio calculation, the OR value is 1.95 or  $OR > 1$ , this shows that pregnant women with no food abstinence culture have 1.95 times less likely to experience CED than pregnant women with no food abstinence culture.

**Table 7 Relationship between Age and Nutritional Status of Pregnant Women in Aceh Barat District**

No	Age	Nutritional status		Total	P-Value	OR (95% CI)
		KEK	No KEK			
1	No Risk	85	153	238	0.113	0.663 (0.399 – 1.102)
2	at risk	28	76	104		
Total		113	229	342		

Source: Primary data processed in 2021

The results of the analysis show that there is no relationship between age and nutritional status of pregnant women in Aceh Barat Regency because p-value = 0.113. This means that the age of pregnant women in Aceh Barat Regency is not a determining factor for the nutritional status

of pregnant women. From the calculation of the Odds Ratio, the OR value is 0.663 or  $OR < 1$ , this indicates that the age at risk is 0.663 times less likely to experience CED than the age not at risk.

**Table 8 Relationship between Education Level and Nutritional Status of Pregnant Women in Aceh Barat District**

No	Level Education	Nutritional status		Total	P-Value	OR (95% CI)
		KEK	No KEK			
1	Tall	19	26	45	0.232	1.541 (0.758 – 3.131)
2	Intermediate	57	125	182		
3	Low	37	78	115		
Total		113	229	342		

Source: Primary data processed in 2021

The results of the analysis show that there is no relationship between education and nutritional status of pregnant women in Aceh Barat District because the p-value  $> 0.05$ . This means that the level of education of pregnant women in Aceh Barat Regency is not a determining factor

for the nutritional status of pregnant women. From the calculation of the Odds Ratio, the OR1 value is 1.541 or  $OR > 1$ , this indicates that pregnant women with a high level of education have 1.541 times less likely to experience CED compared to pregnant women with low education and the OR2 value is 1.603 or  $OR > 1$ , this

indicates that pregnant women with higher education levels are 1,603 times less likely to experience CED than pregnant women with secondary education.

**Table 9 Relationship between family income and nutritional status of pregnant women in Aceh Barat district**

No	Family Income	Nutritional status		Total	P-Value	OR (95% CI)
		KEK	No KEK			
1	≥ UMR	35	111	146	0.002	2.096 (1,303 – 3,373)
2	< UMR	78	118	196		
Total		113	229	342		

Source: Primary data processed in 2021

The results of the analysis show that there is a relationship between the level of family income and the nutritional status of pregnant women in Aceh Barat Regency because p-value = 0.006. Means that the income of pregnant women is high or not is a determining factor for the nutritional status of pregnant women. From

the calculation of the Odds Ratio, the OR value is 2.096 or  $OR > 1$ , this indicates that pregnant women with income UMR have 2,096 times less likely to experience SEZ than pregnant women with income < UMR.

**Table 10 Relationship between Employment and Nutritional Status of Pregnant Women in Aceh Barat District**

No	Mother's Job	Nutritional status		Total	P-Value	OR (95% CI)
		KEK	No KEK			
1	Work	52	92	144	0.304	0.788 (0.5 – 1.241)
2	Does not work	61	137	198		
Total		113	229	342		

Source: Primary data processed in 2021

The results of the analysis show that there is no relationship between occupation and nutritional status of pregnant women in Aceh Barat District because p-value = 0.304. This means that the presence or absence of work for pregnant women is not a determining factor for the nutritional status of pregnant women. From the calculation of the Odds Ratio, the OR value is 0.788 or  $OR < 1$ , this indicates that pregnant women who do not work have 0.788 times less likely to experience CED than pregnant women who work.

## CONCLUSION

1. There is a relationship between food consumption patterns and the nutritional status of pregnant women in West Aceh Regency .
2. There is a relationship between the culture of abstinence from food and the nutritional status of pregnant women in West Aceh Regency .
3. There is no relationship between age and nutritional status of pregnant women in Aceh Barat Regency.
4. There is no relationship between maternal education level and nutritional status of pregnant women in West Aceh District.

5. There is a relationship between family income and the nutritional status of pregnant women in West Aceh Regency .
6. There is no relationship between work and nutritional status of pregnant women in Aceh Barat District .
7. After the multivariate test was carried out, it was found that there were 3 variables determining factors that had a decisive relationship with the level of nutritional status of pregnant women in Aceh Barat Regency, namely family income, food consumption patterns and food abstinence culture.

## SUGGESTION

1. Puskesmas must continue to strive to improve nutrition counseling services for pregnant women, so that nutrition for pregnant women can be fulfilled and pregnant women must always pay attention to consumption patterns, because nutritious food does not have to be expensive.
2. The West Aceh District Health Office can support the provision of education related to eating behavior, taboos and what foods should be consumed for women and are very much needed during the preconception period. This is done in the hope that there will be a reduction in the risk of CED in women.
3. During pregnancy, the head of the family strives for family income so that it is UMR, so that pregnant women avoid the risk of SEZ.

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