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Age Factors, Parity, Birth Distance Dean Nutritional Status Affects the Incidence of *Hyperemesis Gravidarum* in Pregnant Women in the First Trimester at the North Tambun Health Center

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ABSTRACT

Age at risk < 21 years and > 35 years for first pregnancy, short birth spacing, and nutritional status at risk, namely thin, fat and obese can increase the risk of Hyperemesis Gravidarum. Hormonal changes, differences in body response, and nutritional deficiencies can play a role in the appearance of severe symptoms of nausea and vomiting in Hyperemesis Gravidarum. To determine the factors that age, parity, birth spacing and nutritional status influence the incidence of hyperemesis gravidarum in 1st trimester pregnant women at the Tambun Utara Community Health Center in 2024. The sample size in this study used a total of 58 pregnant women in the 1st trimester based on secondary data from the North Tambun Health Center KIA polyclinic as of January - December 2023 which was taken using total sampling. The analysis method used is univariate and bivariate analysis using the chi square test. There is a relationship between birth spacing and nutritional status with the incidence of hyperemesis gravidarum in 1st trimester pregnant women with a P-value < 0.005. However, there is no relationship between maternal age and parity with the incidence of hyperemesis gravidarum in 1st trimester pregnant women at the Tambun Utara Community Health Center in 2024 with a p value > 0.05. It is hoped that all health workers will pay attention to the health of pregnant women, especially those who experience hyperemesis gravidarum which triggers Hyperemesis Gravidarum incidents in 1st Trimester Pregnant Women, one of which is birth spacing and nutritional status.

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INTRODUCTION

According to the WHO (World Health Organization), of all pregnancies in the world, 12.5% of them experience hyperemesis gravidarum. The high incidence of hyperemesis gravidarum in the world has an impact on increasing AKI (Maternal Mortality Rate) (WHO, 2018).

Existing community service estimates that nausea and vomiting occur in 50-90% of pregnancies. Nausea and vomiting occur in 60-80% of women with a first trimester and 40-60% in women with more than 1 pregnancy. This symptom usually begins to be felt 6 weeks after the first day of the last menstrual period and lasts for approximately 10 weeks (Aprilia M, 2020).

Excessive nausea and vomiting during pregnancy, known as *Hyperemesis Gravidarum* (HEG), can be a complication that affects the health status of the pregnant woman and the growth of the fetus conceived. HEG is a more severe condition than the usual nausea experienced during pregnancy and can affect the quality of life of pregnant women (Alfin, Rahma Fadhilah, 2021).

Gravidarum hyperemesis is a medical condition characterized by excessive nausea and vomiting during pregnancy. complaints of severe nausea and vomiting more than 10 times a day during pregnancy which can lead to fluid deprivation, weight loss, or electrolyte disorders, thus interfering with daily activities and endangering the fetus in the womb (Anshory, V. L. S et al (2022).

The process of *Hyperemesis Gravidarum* involves a balance between several neurotransmitters in the body, such as dopamine*, serotonin, histamine, and acetylcholine*. Decreased levels of serotonin in the blood can contribute to the occurrence of more severe nausea and vomiting (Anwar Ibrahim, et al (2021).

Hyperemesis Gravidarum can cause negative impacts on the health of pregnant women, such as dehydration, malnutrition, and significant weight loss. This condition can also affect the quality of life of pregnant women and affect the health of the mother and fetus (Azizah, N., et al., 2023).

Poor nutritional status can also affect the health of the digestive tract, causing gastric irritation and disturbances in liver and pancreatic function. Nutritional deficiencies can weaken the immune system, increasing the risk of infection and inflammation that leads to the occurrence of *Hyperemesis Gravidarum*. (.Alfin, Rahma Fadhilah, 2021).

A woman's age can affect the incidence of *Hyperemesis Gravidarum* in pregnancy through several related factors. First, the hormonal changes that occur during pregnancy can differ between younger and older women. Younger women tend to have higher levels of pregnancy hormones, such as the hormones hCG, estrogen, and progesterone. Higher levels of these hormones can increase the risk of excessive nausea and vomiting, including Hyperemesis Gravidarum (Munir (2022)).

Parity, or the number of previous pregnancies, can play an important role in the incidence of HG. Some studies show that the risk of *Hyperemesis Gravidarum* tends to increase with each subsequent pregnancy. Women who have had *Hyperemesis Gravidarum* in previous pregnancies have a higher risk of experiencing this condition again in subsequent pregnancies. This factor may be related to hormonal changes and the body's response to repeated pregnancies (Indrayani Triana (2018).

The birth distance between pregnancies can also affect the incidence of Hyperemesis Gravidarum. A short interval between pregnancies, especially less than one year, can increase the risk of HG in subsequent pregnancies. A woman's body needs time to recover after a previous pregnancy, including the restoration of nutrients and hormonal balance. If the next pregnancy occurs too soon, the body may not fully recover, and this can increase the risk of nausea and vomiting (. Abednego Bakay , et al, 2023).

The North Tambun Health Center obtained medical record data of pregnant women who experienced *Hyperemesis Gravidarum* in pregnant women in the first trimester recorded from January to December 2023, totaling 46 pregnant women who experienced *Hyperemesis Gravidarum.*

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Of the 46 pregnant women recorded at the North Tambun Health Center, 10 pregnant women who experienced hyperemesis gravidarum were taken to analyze the factors of *Hyperemesis Gravidarum* based on age, parity, birth distance and nutritional status using medical record data recorded at the North Tambun Health Center, the results were obtained that 7 (70%) pregnant women aged < 25 years experienced hyperemesis gravidarum and 3 (30%) > 25 years old. Parity 8 (80%) of pregnant women who have 1-2 children who have hyperemesis gravidarum, birth spacing of less than 2 years is 5 (50%), nutritional status 6 (60%) are obese with BMI > 25.

Based on the initial survey, the community service is interested in exploring more the factors that affect the occurrence of hyperemesis based on age, parity, birth distance, and nutritional status of pregnant women to the incidence of hyperemesis gravidarum. Therefore, the community service title of Age Factors, Parity, Birth Distance and Nutritional Status Affects the Incidence *of Hyperemesis Gravidarum* in Pregnant Women in the 1st Quarter at the North Tambun Health Center in 2024.

METHOD

This study was conducted to determine the factors of age, parity, birth distance and nutritional status affecting the incidence of *hyperemesis gravidarum in* pregnant women in the 1st trimester. This community service was conducted at the North Tambun Health Center from April to May 2024. The independent variables in this study were age, parity, birth distance and nutritional status and the dependent variable is the incidence of *hyperemesis gravidarum*. The sample size in this study uses *a side total*, namely 58 pregnant women in the 1st trimester based on secondary data from the KIA poly of the North Tambun Health Center from January to December 2023 which was taken in *total sampling*. The analysis method used is Univariate and bivariate analysis using *the chi square test*, if it does not meet the requirements, it will be continued with *the Fisher exact test* SPSS. The following are the stages of implementing community service at the North Tambun Health Center:

1. Preparation Stage
   Preparations will be carried out starting in April 2024 consisting of:
   - Starting from a location survey by visiting the location and partners who will be targeted at the North Tambun Community Health Center.
   - The licensing process begins with a permission letter from the university addressed to the relevant institution or organization where services are provided to implement the program. The university also asked for help in obtaining data on the community who will take part in this socialization and training program.
   - Bribery of officers, namely the division of duties and responsibilities of lecturers and students involved in this service.
   - Bribery of materials and media for community service activities such as information brochures containing about pregnancy and factors that influence pregnancy such as age, parity, birth spacing and nutritional status.
   - Preparation of evaluation tools in the form of attendance lists and writing tools used to collect data for further analysis.
2. Implementation of Activities
   This activity will be carried out from April to May 2024. The activities that will be carried out are as follows:
   - Data collection on pregnant women who come to the North Tambun Health Center.
   - Then pregnant women are given a brochure containing information about pregnancy such as age, parity, birth spacing and nutritional status.
   - Next, the officer on duty provided education to the pregnant mother and ended with a question and answer session and also gave memento gifts.

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RESULTS AND DISCUSSION

Univariate Analysis

TABLE 1. Distribution of Frequency of Occurrences *of Gravidarum Hyperemesis* in Pregnant Women in the 1st Trimester at the North Tambun Health Center in 2024

Age of Menopouse	Number (n)	Percentage (%)
Experiencing *Hyperemesis Gravidarum*	13	22,4
Not Experiencing *Gravidarum Hyperemesis*	45	77,6
Total	**58**	**100**

Based on table 1 above, it shows that of the 58 respondents, the majority did not experience *Gravidarum Hyperemesis* as many as 45 respondents (77.6*%), 13 respondents (22.4*%) experienced Gravidarum Hyperemesis.

TABLE 2. Distribution of Age Frequency, Parity, Birth Distance, Nutritional Status of Pregnant Women in the 1st Quarter at the North Tambun Health Center in 2024
N = 58

Characteristics Responden	Number (n)	Percentage (%)
Age		
Age at Risk (< 20 years and > 35 years)	26	17,0
Age Not at Risk (21-35 years)	67	43,8
Parity		
Parity at risk (number of children > 4 people)	26	17,0
Parity is not at risk (number of children 1-3 people)	67	43,8
Birth Distance		
Birth distance at risk (< 2 years and > 10 years)	35	22,9
Birth distance is not risky (2 – 5 years apart)	30	19,6
Nutritional Status		
Poor Nutritional Status (BMI < 18.5 and > 25	34	22,2

Based on table 2 above, it shows that of the 58 respondents, the majority of pregnant women are not at risk (21-35 years) as many as 67 people (43.8%) and the age at risk (< 20 years and > 35 years) as many as 26 people (17.0%). The majority of pregnant women were not at risk (number of children 1-3 people) and the parity was at risk (number of children > 4 people) as many as 26 people (17.0%). The birth distance of pregnant women is the majority of risky births (2-year < and 10-year > as many as 35 people (22.9%) and the non-risk pregnancy distance (2-5 years distance) as many as 30 people (19.6%). The nutritional status of pregnant women was mostly well nourished (BMI 18.5 – 24.9) as many as 48 people (31.4%) and poor nutritional status (BMI < 18.5 and > 25) as many as 34 people (22.2%).

Bivariate Analysis

TABLE 3. Age Relationship with the Incidence of *Hyperemesis Gravidarum in* Pregnant Women in the 1st Trimester at the North Tambun Health Center in 2024

Age	Incidence of *Hyperemesis Gravidarum* in Pregnant Women						*Asymp.sign (2 – sided*
	Experiencing Hyperemesis Gravidarum		Not Experiencing Gravidarum Hyperemesis		Total		
	n	%	N	%	n	%	
Age at Risk	12	24	38	76	50	100	
Age Not at Risk	1	12,5	7	87,5	8	100	0,469

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The results of the Age Analysis with the Incidence of *Hyperemesis Gravidarum in* Pregnant Women in Trimester 1 using *Chi-square* obtained a significance value of 0.469, because *the p-value* > *α* (*p-value>0.05),* so it can be concluded that there is no age relationship with the incidence *of Hyperemesis Gravidarum in* Pregnant Women in Trimester 1 at the North Tambun Health Center in 2024.

TABLE 4. Parity Relationship with the Incidence *of Hyperemesis Gravidarum in* Pregnant Women in the 1st Trimester at the North Tambun Health Center in 2024

Parity	Incidence of *Hyperemesis Gravidarum* in Pregnant Women						*Asymp.sign (2 – sided*
	Experiencing Hyperemesis Gravidarum		Not Experiencing Gravidarum Hyperemesis		Total		
	n	%	N	%	n	%	
Parity at Risk	13	27,1	35	72,9	48	100	
Parity is not risky	0	0,0	10	100	10	100	0,062

The results of the parity analysis with the incidence of *hyperemesis gravidarum in* pregnant women in the 1st trimester using *Chi-square* obtained a significance value of 0.062, because *the p-value* > *α* (*p-value>0.05),* so it can be concluded that there is no relationship between parity and the incidence of *hyperemesis gravidarum in* pregnant women in the 1st trimester at the North Tambun Health Center in 2024.

TABLE 5. The Relationship Between Birth Distance and the Incidence of *Hyperemesis Gravidarum in* Pregnant Women in the 1st Trimester at the North Tambun Health Center in 2024

Birth Distance	Incidence of *Hyperemesis Gravidarum* in Pregnant Women						*Asymp.sign (2 – sided*
	Experiencing Hyperemesis Gravidarum		Not Experiencing Gravidarum Hyperemesis		Total		
	n	%	n	%	n	%	
Birth Distance at Risk	13	28,9	32	71,1	45	100	0,028
Birth Distance Is Not Risky	0	0,0	13	100	13	100	

The results of the analysis of Birth Distance with the Incidence of *Hyperemesis Gravidarum in* Pregnant Women in Trimester 1 using *Chi-square* obtained a significance value of 0.028, because *the p-value* < *α* (*p-value<0.05),* then it can be concluded that there is a relationship between Birth Distance and the Incidence of *Hyperemesis Gravidarum* Pregnant Women in Trimester 1 at the Tambun Utara Health Center in 2019 2024.

TABLE 6. The Relationship between Nutritional Status and the Incidence of *Hyperemesis Gravidarum in* Pregnant Women in the 1st Trimester at the North Tambun Health Center in 2024

Nutritional Status	Incidence of *Hyperemesis Gravidarum* in Pregnant Women						*Asymp.sign (2 – sided*
	Experiencing Hyperemesis Gravidarum		Not Experiencing Gravidarum Hyperemesis		Total		
	n	%	n	%	n	%	
Good nutritional status	9	56,2	7	43,8	16	100	0,000
Poor nutritional status	4	9,5	38	90,5	42	100	

The results of the analysis of nutritional status with the incidence of *Hyperemesis Gravidarum in* Pregnant Women in Trimester 1 using *Chi-square* obtained a significance value of 0.000, because *the p-value* < *α* (*p-value<0.05),* it can be concluded that there is a relationship between nutritional status and the incidence of *Hyperemesis Gravidarum in* Pregnant Women in Trimester 1 at the North Tambun Health Center in 2024.

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Age Relationship with the Incidence of *Hyperemesis Gravidarum in* Pregnant Women in the 1st Trimester at the North Tambun Health Center in 2024

The results of the analysis of the absence of age relationship with the incidence of *Hyperemesis Gravidarum in* Pregnant Women in the 1st Quarter at the North Tambun Health Center in 2024 using *Chi-square* obtained a significance value of 0.469, because *the p-value* > *α* (*p-value>0.05)*

The community service is in line with Reni & Oktaviani (2023) that maternal age characteristics have no relationship with the incidence of hyperemesis gravidarum (p-value = > 0.05). Hyperemesis gravidarum is a medical condition that can occur during pregnancy, which is characterized by excessive nausea and vomiting that can lead to dehydration and electrolyte imbalance.

The mechanism of hyperemesis gravidarum can be caused by several factors, such as an increase in the hormone human chorionic gonadotropin (hCG) which can cause temporary hyperthyroidism, changes in the levels of the hormones estrogen and progesterone which can slow gastric emptying, genetic factors that increase the risk of this condition, psychological factors such as stress and anxiety, and sensitivity to certain odors and smells during pregnancy (Atiqoh, N. R. 2020)

There are several main causes that can cause hyperemesis gravidarum in pregnant women. First, an increase in the human chorionic gonadotropin hormone (hCG) produced by the placenta and drastically increased during pregnancy, especially in the first trimester, can trigger a hyperemesis response (Jekrida, A., et al, 2020).

In addition, pregnancy can also cause temporary hyperthyroidism, where increased production of thyroid hormones can lead to more severe symptoms of nausea and vomiting. Changes in estrogen and progesterone levels during pregnancy can also affect the digestive system and trigger hyperemesis (Atiqoh, N. R. 2020).

Genetic factors, such as a family history of hyperemesis gravidarum, as well as sensitivity to certain odors or odors, can increase the risk of developing this condition. Finally, psychological factors, such as stress and anxiety during pregnancy, can also worsen symptoms of nausea and vomiting by affecting the central nervous system and digestive function. The combination of these various factors can cause hyperemesis gravidarum in pregnant women, and understanding these causes is important for the effective management and prevention of this condition (Atiqoh, N. R. 2020)

Hyperemesis gravidarum, a condition of severe nausea and vomiting during pregnancy, can have a significant impact on pregnant women and fetuses. For pregnant women, hyperemesis gravidarum can lead to dehydration and electrolyte imbalance due to excessive vomiting, as well as malnutrition and significant weight loss due to inadequate nutritional intake (Atiqoh, N. R. 2020)

This condition can also interfere with kidney function and cause psychological problems, such as stress, anxiety, and depression. Meanwhile, for the fetus, growth and development can be stunted due to malnutrition and nutritional deficiencies in the mother. Uncontrolled hyperemesis gravidarum can also increase the risk of premature birth and congenital defects in the fetus, although a direct link is still debated. If not treated properly, hyperemesis gravidarum can have serious consequences for maternal and fetal health, so early identification and proper treatment are essential to minimize the negative impact of this condition (Atiqoh, N. R. 2020)

The community service assumption that there is no clear relationship between the age of pregnant women and the incidence of hyperemesis gravidarum can be concluded that the mechanism of hyperemesis gravidarum is more related to other factors, such as an increase in human chorionic gonadotropin (hCG) and temporary hyperthyroidism, changes in estrogen and progesterone levels during pregnancy, genetic factors and sensitivity to odors/food, as well as psychological factors such as stress and anxiety. Hyperemesis gravidarum can be experienced by young and older pregnant women, depending on

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other factors that are more dominant in causing symptoms of nausea and excessive vomiting during pregnancy.

Parity Relationship with the Incidence *of Hyperemesis Gravidarum in* Pregnant Women in the 1st Trimester at the North Tambun Health Center in 2024

The results of the analysis of the absence of an age relationship with the incidence of *Hyperemesis Gravidarum in* Pregnant Women in the 1st Quarter at the North Tambun Health Center in 2024 using *Chi-square* obtained a significance value of 0.062, because *the p-value* > *α* (*p-value>0.05).*

The community service is in line with Reni & Oktaviani (2023) The results showed that there was a significant relationship for gestational age characteristics (p-value=0.001), while maternal age characteristics had no relationship with the incidence of hyperemesis gravidarum (p-value= > 0.05).

Parity is the state of giving birth to a child either alive or dead, but not an abortion, regardless of the number of children. Thus, twin births are only counted as one parity (Munir, 2022).

According to Atiqoh's theory, N. R. (2020) hormonal factors and the health condition of pregnant women do play a greater role in determining the incidence of hyperemesis gravidarum (a condition of excessive nausea and vomiting during pregnancy) compared to parity or the number of previous pregnancies. During pregnancy, there is a drastic increase in levels of the human chorionic gonadotropin (hCG) and estrogen.

According to Atiqoh's theory, N. R. (2020) In women with a higher sensitivity to hormonal changes, an increase in this hormone can trigger an excessive hyperemesis response. In addition, women with a history of certain diseases, such as thyroid disease, diabetes, or gastrointestinal disorders, also have a higher risk of developing hyperemesis gravidarum. This is because poor health conditions can make the mother's body less able to adapt to hormonal changes during pregnancy.

According to the understanding, community service can conclude that there is no association between parity (number of previous pregnancies) and the incidence of hyperemesis gravidarum (a condition of excessive nausea and vomiting during pregnancy) caused by several factors. A history of hyperemesis gravidarum in previous pregnancies is the strongest risk factor, where women who have experienced it before have a higher risk of experiencing it again.

However, parity or the number of previous pregnancies itself has not been shown to be associated with an increased risk of this condition. This is because other factors such as hormones, maternal health conditions, and the sensitivity of the mother's body to hormonal changes play a greater role in determining the incidence of hyperemesis gravidarum.

The Relationship Between Birth Distance and the Incidence of *Hyperemesis Gravidarum in* Pregnant Women in the 1st Trimester at the North Tambun Health Center in 2024

The results of the analysis of the relationship between birth distance and the incidence of *Hyperemesis Gravidarum in* Pregnant Women in the 1st Quarter at the North Tambun Health Center in 2024 using *Chi-square* obtained a significance value of 0.028, because *the p-value* < *α* (*p-value<0.05).*

The community service is in line with Nurhasanah, et al (2022).there is a relationship between pregnancy distance and the incidence of hyperemesis gravidarum, according to her opinion it is explained that the highest proportion of maternal mortality does occur in mothers with a priority of 1-3 children, and among this group, mothers with a pregnancy gap of less than 2 years have a much higher proportion of deaths.

The pregnancy distance that is too close does not give enough time for the uterus and the mother's body to recover from previous pregnancy and childbirth. This can lead to physical and mental fatigue, as well as nutritional deficiencies, which can increase the risk of complications during pregnancy and

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childbirth. Therefore, it is very important for mothers to maintain an ideal pregnancy distance, which is at least 2 years after giving birth. This can help mothers to have enough recovery time, meet their nutritional needs, and maintain the health of their uterus, so that it can minimize the risk of maternal complications and death (Umboh *et al*., 2021).

The close pregnancy distance can disrupt the mother's hormonal balance. This is caused by several factors, such as high levels of the HCG hormone, a lack of the hormone progesterone, impaired estrogen balance, and adrenal fatigue. These hormonal disorders can increase the risk of hyperemesis gravidarum (HG), miscarriage, premature birth, and other complications. (Umboh, et al (2021).

Nonetheless, it is important to remember that not all women who are pregnant in close proximity have hormonal disorders. This can be seen based on the results of a study that experienced a risky birth interval (< 2 years and > 10 years) without Hyperemesis gravidarum as many as 32 people.

Based on previous community service and theory, community service concluded that pregnancy spacing that is too close can cause hormonal balance problems in pregnant women. This is due to several factors, such as excessively high levels of the hormone HCG (Human Chorionic Gonadotropin). This hormone is produced by the placenta during pregnancy and too much of it can have a negative impact. In addition, a lack of the hormone progesterone can also be annoying, even though progesterone is important for maintaining pregnancy.

An imbalance of the hormone estrogen can also be a problem, as estrogen plays an important role in pregnancy. Furthermore, fatigue in the adrenal glands that regulate stress hormones can affect other hormones. As a result, this hormonal imbalance can increase the risk of hyperemesis gravidarum (HG) or severe morning sickness in pregnant women. However, it is important to remember that not all pregnant women with a close pregnancy will experience this hormonal disorder. Every pregnancy and mother's condition is different.

The Relationship between Nutritional Status and the Incidence of *Hyperemesis Gravidarum in* Pregnant Women in the 1st Trimester at the North Tambun Health Center in 2024

The results of the analysis of the relationship between nutritional status and the incidence of *Hyperemesis Gravidarum in* Pregnant Women in the 1st Quarter at the North Tambun Health Center in 2024 using *Chi-square* obtained a significance value of 0.000, because *the p-value* < *α* (*p-value<0.05).*

Community service in line with Alfin & Rahma Fadhilah (2021) there is a relationship between nutritional status and the incidence of *Hyperemesis Gravidarum* in Pregnant Women in Trimester 1. Hormonal changes during pregnancy are the main factor causing hyperemesis gravidarum. In the first trimester of pregnancy there are several significant hormonal changes in women such as increased levels of the hormones estrogen and progesterone, and the release of hCG by the placenta. The production of hCG functions to increase the level of the hormone progesterone by maintaining the biosynthesis activity of the corpus luteum so that thickening and maintenance of the endometrium occurs properly. This increase in hormones can inhibit gastric muscle contraction and gastric motility, resulting in gastric dysrhythmia which can stimulate nausea and vomiting.

In mothers with excess BMI, estrogen levels are higher than in mothers with normal BMI because in addition to being produced by the ovaries, estrogen can also be produced by fat or also called estron. In addition to affecting estrogen production, mothers with excess BMI will experience fat accumulation in adipose tissue which is associated with increased progesterone receptors. (Purwanti, M., et al, 2020).

Hyperemesis gravidarum (HEG) that occurs in pregnant women with low BMI can be caused by protein deficiency. During pregnancy, the formation of new cells occurs that require an increase in protein in their

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formation. Pregnant women with poor BMI status will experience protein deficiency in a short time due to the increased need for protein. This protein deficiency can cause gastric dysrhythmia which will trigger excessive nausea and vomiting (Wahyurianto, Y., Purwanto, H., Rohmatin, 2018).

Pregnant women with poor nutritional status (chronic energy deficiency/KEK) have a higher risk of developing HG compared to pregnant women who are adequately nourished or more. This is thought to be because deficiencies in certain nutrients, such as vitamin B6, folic acid, and iron, can worsen nausea and vomiting in pregnant women with Hyperemesis Gravidarum (Jekrida, et al, 2020).

According to Fatmawati, Rica (2018) suggests that pregnant women with obesity or overweight have a higher risk of experiencing HG compared to pregnant women with normal weight. This may be because obesity can increase levels of the hormones estrogen and progesterone, which can trigger nausea and vomiting. The higher the occurrence of hyperemesis gravidarum, the lower the nutritional status of pregnant women. It is recommended for pregnant women to maintain a balanced diet so that hormones during pregnancy will not experience hyperemesis gravidarum.

Based on the information provided, it can be concluded that some studies show that pregnant women with good nutritional status (no nutritional deficiency or overnutrition) have a lower risk of developing hyperemesis gravidarum (HG) or severe morning sickness, compared to pregnant women who have poor or more nutritional status.

This can be caused because pregnant women with good nutritional status have sufficient nutrient reserves. Adequate nutrient reserves can help pregnant women's bodies to better cope with and manage symptoms of nausea and vomiting that occur during pregnancy. In other words, good nutritional status during pregnancy can be a protective factor against the risk of hyperemesis gravidarum or severe morning sickness. Maintaining optimal nutritional status during pregnancy can be one of the efforts to prevent or reduce nausea and vomiting problems that often occur in some pregnant women.

CONCLUSION

Based on the results and discussion of the community service results, it can be concluded that:

1. The majority of 58 respondents did not experience *Gravidarum Hyperemesis*, 45 respondents (77.6%), *13 respondents (22.4%) experienced* Gravidarum Hyperemesis.
2. 58 respondents found that the majority of pregnant women were not at risk (21-35 years old) as many as 67 people (43.8%) and the age at risk (< 20 years old and > 35 years old) as many as 26 people (17.0%). The majority of pregnant women were not at risk (number of children 1-3 people) and the parity was at risk (number of children > 4 people) as many as 26 people (17.0%). The birth distance of pregnant women is the majority of risky births (2-year < and 10-year > as many as 35 people (22.9%) and the non-risk pregnancy distance (2-5 years distance) as many as 30 people (19.6%). The nutritional status of pregnant women was mostly well nourished (BMI 18.5 – 24.9) as many as 48 people (31.4%) and poor nutritional status (BMI < 18.5 and > 25) as many as 34 people (22.2%).
3. The results of the Age Analysis with the Incidence of *Hyperemesis Gravidarum* in Pregnant Women in Trimester 1 using *Chi-square* obtained a significance value of 0.469, because *the p-value* > *α* (*p-value>0.05),* so it can be concluded that there is no age relationship with the incidence *of hyperemesis gravidarum in* pregnant women in the 1st trimester at the North Tambun Health Center in 2024.
4. The results of the parity analysis with the incidence of *hyperemesis gravidarum in* pregnant women in the 1st trimester using *Chi-square* obtained a significance value of 0.062, because *the p-value* > *α* (*p-value>0.05),* it can be concluded that there is no relationship between the incidence of hyperemesis *gravidarum in* pregnant women in the 1st trimester at the North Tambun Health Center in 2024.
5. The results of the analysis of Birth Distance with the Incidence of *Hyperemesis Gravidarum in* Pregnant Women in Trimester 1 using *Chi-square* obtained a significance value of 0.028, because *the p-value* <

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α (*p-value<0.05),* then it can be concluded that there is a relationship between Birth Distance and the Incidence of *Hyperemesis Gravidarum* Pregnant Women in Trimester 1 at the Tambun Utara Health Center in 2019 2024.

6. The results of the analysis of nutritional status with the incidence of *Hyperemesis Gravidarum in* Pregnant Women in Trimester 1 using *Chi-square* obtained a significance value of 0.000, because *the p-value* < *α* (*p-value<0.05),* it can be concluded that there is a relationship between nutritional status and the incidence of *Hyperemesis Gravidarum in* Pregnant Women in Trimester 1 at the North Tambun Health Center in 2024.

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