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# FACTORS THAT INFLUENCE HYPEREMESIS GRAVIDARUM

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**ABSTRAK FAKTOR-FAKTOR YANG MEMPENGARUHI TERJADINYA HIPEREMESIS GRAVIDARUM**

Latar Belakang Kehamilan dengan komplikasi mual dan muntah adalah gejala umum pada sekitar 70% sampai 85% dari semua kehamilan. Insiden kasus hiperemesis gravidarum adalah 0,8% sampai 3,2% dari seluruh kehamilan atau sekitar 8 sampai 32 kasus per 1000 kehamilan. Berdasarkan data Provinsi Sumatera Utara angka kejadian hiperemesis gravidarum sebesar 59% dan di Kota Medan hiperemesis gravidarum masih mencapai 35%.

Tujuan penelitian adalah untuk mengetahui faktor-faktor yang mempengaruhi hiperemesis gravidarum di RSU Sundari Tahun 2019.

Metode Jenis penelitian dalam penelitian ini adalah survei kuantitatif analitik dengan desain penelitian cross sectional. Jumlah populasi sebanyak 226 responden dan sampel yang digunakan total populasi sebanyak 226 responden. Data yang digunakan adalah data sekunder. Analisis data menggunakan bivariat dan multivariat.

Hasil yang diperoleh dengan menggunakan uji chi square, ada hubungan umur p = 0,002, ada hubungan paritas p = 0,000, ada hubungan umur kehamilan p = 0,005, ada hubungan umur kehamilan p = 0,000, tidak ada hubungan antara kehamilan ganda p = 0,488.

Kesimpulan Usia kehamilan merupakan pengaruh paling dominan terhadap terjadinya hiperemesis gravidarum dengan nilai Exp (B) sebesar 9.943 (95% CI, 4.859-20.348).

Sarankan kepada RSUD Sundari untuk meningkatkan pelayanan sehingga dapat menurunkan angka hiperemesis gravidarum dengan memberikan penyuluhan dan pembuatan spanduk dan poster tentang pencegahan dan pengobatan dini hiperemesis gravidarum.

Kata kunci: Gemeli, gestasi, Hiperemesis Gravidarum, interval kehamilan, paritas, usia

**ABSTRACT**

Background Pregnancies complicated by nausea and vomiting are a common symptom in about 70% to 85% of all pregnancies. The incidence of hyperemesis gravidarum cases is 0.8% to 3.2% of all pregnancies or about 8 to 32 cases per 1000 pregnancies. Based on data from North Sumatra Province, the incidence of hyperemesis gravidarum was 59% and in Medan City, hyperemesis Gravidarum still reached 35%.

Purpose to determine the factors that influence hyperemesis gravidarum at Sundari General Hospital in 2019.

Methods The type of research in this study was a quantitative analytic survey using a cross sectional study design. The total population was 226 respondents and the sample used a total population of 226 respondents. The data used are secondary data. Data analysis used bivariate and multivariate.

Results obtained by using the chi square test, there is a relationship between age p = 0.002, there is a relationship of parity p = 0.000, there is a relationship between gestational age p = 0.005, there is a relationship between gestational age p = 0.000, there is no relationship between multiple pregnancies p = 0.488.

Conclusion Gestational age was the most dominant influence on the occurrence of hyperemesis gravidarum with an Exp (B) value of 9,943 (95% CI, 4,859-20,348).

Suggestion for Sundari Hospital to improve services so that the hyperemesis gravidarum rate can decrease by providing counseling and making banners and posters about the prevention and early treatment of hyperemesis gravidarum.

Keywords: Gemeli, gestation, Hyperemesis Gravidarum, gestational interval, parity, age

## INTRODUCTION

In early pregnancy sometimes mothers experience problems or complications such as excessive nausea and vomiting even to severe hyperemesis gravidarum, while normal is only normal nausea and vomiting that is often experienced by pregnant women which is one of the earliest symptoms of pregnancy (diana,2019).

Complications of pregnancy include hyperemesis gravidarum which is characterized by excessive nausea and vomiting, weight loss and electrolyte balance disorders occurring 1-2% in pregnancy generally lasting up to the 20th week of gestation with uncontrolled nausea and vomiting nearly 20 times. per day (Rofiah,2019)The number of pregnant women who experience complaints of excessive nausea and vomiting is 50 to 90%. This complaint is usually accompanied by hypersalivation, headache, flatulence, and weakness in the body. These complaints are commonly known as "morning sickness" (Sari ,2021)

Emesis gravidarum is a normal symptom and is often found in the 1st trimester of pregnancy.(Sari,2019) The desire for nausea and vomiting usually occurs at the beginning of the week and lasts until the 4th month, but about 12% of pregnant women experience nausea and vomiting until the 9th month of pregnancy (Handayani,2018) Pregnant women vomit up everything they eat and drink until they lose weight, Decreased skin turgor, reduced diuresis and acetonuria occur, this condition requires hospitalization.(Yusuf,2018) Comparison of the incidence of hyperemesis gravidarum 4: 1000 pregnancies. (Abidah,2019)

Hyperemesis gravidarum or excessive nausea and vomiting often occurs in the morning, it can even occur anytime or sometimes at night. These symptoms are 40-60% common in multigravida In Indonesia, complications with nausea and vomiting in pregnant women with signs of nausea and vomiting are around 70-85% of all pregnant women. The incidence of cases of hyperemesis gravidarum is 0.8% to 3.2% of all pregnancies or about 8 to 32 cases per 1000 pregnancies (Nurbaity,2019).

Pregnancy with hyperemesis gravidarum according to the World Health Organization (WHO) reaches 12, 5% in pregnancies that occur with various problems such as nausea and vomiting, for Sweden it is 0.3%, while for California it is 0.5%, in Canada it is 0.8%, China is 70%, for Norway it is 0.9%, Pakistan is 2.2%, and Turkey by 1.9% (Nurbaity,2019)While the incidence of hyperemesis gravidarum in Indonesia is from 1-3% of all pregnancies. The incidence of hyperemesis gravidarum in Surabaya was 24% and in West Java 13% South Sulawesi in 2018 as many as 62.99%. (Pakpahan,2018)Aceh Province (9.1%) experienced hyperemesis gravidarum. Meanwhile, for North Sumatra Province, based on the results of the central level data, the incidence of hyperemesis gravidarum occurred as much as 59%. In the city of Medan, the rate of hyperemesis Gravidarum still reaches 35% (Astuti,2017)

In maternal and child health, especially pregnant women who experience complications with hyperemesis gravidarum can be caused by the age of the mother, the number of children born, (Mudlikah,2019) Mother's education, mother's attitude, and knowledge. (Atiqoh and Keb 2020) In addition, predisposing factors associated with the risk of hyperemesis gravidarum are diabetes, hydatidiform mole, and multiple pregnancies due to increased levels of HCG. (Khairiah,2021)

In addition, other causative factors can be in the form of parental work, anxiety of pregnant women themselves, family rifts, excessive fear during pregnancy. In addition, fear of giving birth and not daring to take on greater responsibilities and other endocrine factors 40% - 60% of these symptoms occur in multigravida. (Rinata,2017) While 60% - 40% often occurs in primigravida.(Muchtar,2018) If hyperemesis lasts continuously and is not treated immediately it will result in gastritis. Increased stomach acid will exacerbate nausea and vomiting in pregnant women (Susiloningtyas,2018).

According to Lubis (Muchtar 2018) states that the condition of hyperemesis gravidarum found in the first 16 weeks of pregnancy is nausea and vomiting, pregnant women in the 1st trimester experience nausea and vomiting of approximately 66%, while nausea accompanied by vomiting reaches 34%. (Kurniasih,2019) If all the food eaten is vomited in pregnant women, weight will decrease, skin turgor is reduced, and acetonuria occurs. This condition can cause interference with pregnancy (Armanili,2020).

Excessive nausea and vomiting has an adverse effect on pregnant women such as anemia during pregnancy. It is known that excessive nausea and vomiting can make anemia in pregnant women also due to lack of nutrition or nutritional intake eaten by pregnant women (Lubis,2015)

The results of the initial survey conducted at the Sundari General Hospital on January 27, 2020 at the Sundari General Hospital in Medan City, showed that there were 240 pregnant women and 105 cases of hyperemesis gravidarum in 2018. Meanwhile, in 2019 out of 226 people who experienced hyperemesis gravidarum it reached 117 people, and when viewed from 2018 to 2019 there was an

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increase in the occurrence of hyperemesis gravidarum from 2018 to 2019 at Sundari Hospital, Medan City. Based on the problems above, it makes researchers interested in examining the causes of hyperemesis gravidarum. The purpose of this research is to determine the factors that influence the occurrence of hyperemesis gravidarum at Sundari General Hospital in Medan in 2019.

## RESEARCH METHODOLOGY

The type of research used is a type of analytical survey research (analytic research) with a cross sectional approach (20) Location This research was conducted at Sundari General Hospital, Medan Sunggal District, Medan City, North Sumatra and the research time was from August 2019 to March 2020. In In this study, researchers used secondary data (medical records) in 2019. The population in this study were all hospitalized pregnant women, namely 226 pregnant women at Sundari General Hospital, Medan City. The sample taken must meet the criteria, namely all pregnant women who are hospitalized at Sundari General Hospital as many as 226 people. Data analysis performed was univariate analysis, bivariate and multivariate analysis. Univariate data analysis was carried out to describe the characteristics of each independent variable and dependent variable. Bivariate analysis was carried out to prove that there was no significant relationship between the independent variable and the dependent variable using the Chi-square test. Multivariate data analysis aims to determine the effect of the independent variable and to determine the most dominant variable affecting the dependent variable (hyperemesis gravidarum in pregnant women).

## RESEARCH RESULTS

**Table 1**
**Frequency distribution by age of pregnant women inpatient at Sundari General Hospital, Medan City in 2020**

| Age | n | % |
|---|---|---|
| 20-35 age | 133 | 58.8 |
| <20 age >35 age | 93 | 41.2 |
| Total | 226 | 100 |

Table 1 shows that of the 226 respondents who were hospitalized at Sundari General Hospital, Medan City, 133 people (58.8%) were aged 20-35 years and aged <20 years and >35 years, namely 93 people (41.2%).

**Table 2**
**Frequency Distribution Based on Parity of Inpatient Pregnant Women at RSU Sundari, Medan City in 2020.**

| Paritas | n | % |
|---|---|---|
| Ideal | 144 | 63.7 |
| No ideal | 82 | 36.3 |
| Jumlah | 226 | 100 |

Based on table 2 shows that of the 226 respondents who were hospitalized at the Sundari General Hospital, Medan City, there were 144 people (63.7%) the ideal and not ideal numbers were 82 people (36.3%).

**Table 3**
**Distribution of Frequency Based on Pregnancy Distance for Pregnant Women Inpatient at Sundari General Hospital, Medan City in 2020**

| Distance for Pregnant | n | % |
|---|---|---|
| Ideal | 131 | 58.0 |
| No Ideal | 95 | 42.0 |
| Jumlah | 226 | 100 |

Based on table 3, it shows that of the 226 respondents who were hospitalized at Sundari General Hospital, Medan City, 131 people (58.0%) had the ideal pregnancy distance and the non-ideal distance was 95 people (42.0%).

**Table 4**
**Frequency distribution based on multiple pregnancies of pregnant women inpatient at Sundari General Hospital, Medan City in 2020**

| Gemeli | n | % |
|---|---|---|
| No | 219 | 96.9 |
| Yes | 7 | 3.1 |
| Total | 226 | 100 |

Based on table 4 shows that of the 226 respondents who were hospitalized at Sundari General Hospital, Medan City, 219 people (96.9%) were not happy and 7 people were happy (3.1%).

Based on table 5 shows that of the 226 respondents who were hospitalized at Sundari General Hospital, Medan City, 135 people (59.7%) had gestational age >TM 1 and TM 1 were 91 people (40.3%).

**Table 5**
**Distribution of Frequency Based on Gestational Age of Pregnant Women Inpatient at Sundari General Hospital, Medan City in 2020**

| Gestasi Age | n | % |
|---|---|---|
| >TM 1 | 135 | 59.7 |
| ≤TM 1 | 91 | 40.3 |
| Total | 226 | 100 |

Based on table 6 shows that of the 226 respondents who were hospitalized at Sundari General Hospital, Medan City, 109 people (48.2%) had no hyperemesis gravidarum and 117 people (51.8%).

**Distribution of the Frequency of Hospitalizations with Hyperemesis Gravidarum at Sundari General Hospital, Medan City in 2020**

| Hiperemesis Gravidarum | n | % |
|---|---|---|
| No hiperemesis | 109 | 48.2 |
| Hiperemesis | 117 | 51.8 |
| Total | 226 | 100 |

**Table 6**

**Table 7**
**Cross-tabulation of the relationship between age and hyperemesis gravidarum at Sundari General Hospital, Medan City in 2020**

| Age | Hiperemesis Gravidarum | | | | Total | | P | OR (95%CI) |
|---|---|---|---|---|---|---|---|---|
| | Yes | | No | | | | | |
| | N | % | n | % | N | % | | |
| <20->35 Age | 60 | 26.5 | 33 | 14.6 | 93 | 41.2 | 0,002 | 2.424 |
| 20-35 Age | 57 | 25.3 | 76 | 33.6 | 133 | 58.8 | | |
| Jumlah | 117 | 51.8 | 109 | 48.2 | 226 | 100 | | |

Based on table 7, the results of the cross tabulation of age with hyperemesis gravidarum showed that of 93 people (41.2%) aged <20->35 years, 60 people (26.5%) had hyperemesis gravidarum and 33 people (14.6%) did not. While pregnant women aged 20 -35 years were 133 people (58.8%) of which 57 people (25.3%) had hyperemesis gravidarum and 76 people (33.6%) did not.

The relationship between age and hyperemesis gravidarum at Sundari General Hospital in Medan City in 2020 based on the results of the chi-square statistical test analysis obtained p value = 0.002 < 0.05 with OR 1.404-4.186 (95% CI), this shows that age <20->35 year 2 times affect the occurrence of hyperemesis gravidarum.

**Table 8**
**Cross tabulation of parity relationship with Hyperemesis Gravidarum at Sundari General Hospital, Medan City in 2020**

| Paritas | Hiperemesis Gravidarum | | | | Total | | P | OR (95%CI) |
|---|---|---|---|---|---|---|---|---|
| | Yes | | No | | | | | |
| | N | % | N | % | N | % | | |
| No Ideal | 67 | 29.6 | 15 | 6.6 | 82 | 36.3 | 0.000 | 8.397 |
| Ideal | 50 | 22.2 | 94 | 41.6 | 144 | 63.7 | | |
| Total | 117 | 51.8 | 109 | 48.2 | 226 | 100 | | |

Based on table 8 the results of the cross tabulation of parity with hyperemesis gravidarum, it was found that of 82 people (36.3%) whose parity was not ideal where as many as 67 people (26.6%) had hyperemesis gravidarum and 15 people (6.6%) did not have hyperemesis gravidarum. Meanwhile, pregnant women with ideal parity were 144 people (63.7%), of which 50 people (22.2%), had hyperemesis gravidarum and 94 people (41.6%) did not.

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The relationship between parity and hyperemesis gravidarum at Sundari General Hospital, Medan City in 2020 based on the results of the chi-square statistical test analysis, obtained p = 0.000 <0.05 with OR 4.355-16.192 (95% CI), this shows that parity 1 child is 8 times affect hyperemesis gravidarum.

**Table 9**
**Cross-tabulation of the relationship between pregnancy distance and hyperemesis gravidarum at Sundari General Hospital, Medan City in 2020**

| Jarak Kehamilan | Hiperemesis Gravidarum | | | | Jumlah | | P | OR (95%CI) |
|---|---|---|---|---|---|---|---|---|
| | Ya | | Tidak | | | | | |
| | N | % | n | % | n | % | | |
| Tidak ideal | 60 | 25.3 | 35 | 15.5 | 95 | 42.0 | 0,005 | 2.226 |
| Ideal | 57 | 26.5 | 74 | 32.7 | 131 | 58.0 | | |
| Total | 117 | 51.8 | 109 | 48.2 | 226 | 100 | | |

Based on table 9 the results of the cross tabulation of pregnancy spacing with hyperemesis gravidarum, it was found that of 95 people (42.0%) whose gestational distance was not ideal where as many as 60 people (25.3%) had hyperemesis gravidarum and 35 people (15.5%) did not have hyperemesis gravidarum. Meanwhile, there were 135 pregnant women (58.0%) who had ideal pregnancy intervals, of which 57 (26.5%) had hyperemesis gravidarum and 74 (32.7%) did not.

The relationship between gestational distance and hyperemesis gravidarum at Sundari General Hospital, Medan City in 2020 based on the results of the chi-square statistical test analysis, obtained p value = 0.005 < 0.05 with OR 1.295-3,824 (95% CI), this indicates that the gestational distance is not ideal for children. 2 times affect hyperemesis gravidarum.

**Table 10**
**Cross Tabulation of the Relationship between Multiple Pregnancy and Hyperemesis Gravidarum at Sundari General Hospital, Medan City in 2020**

| Gemelli | Hiperemesis Gravidarum | | | | Total | | P | OR (95%CI) |
|---|---|---|---|---|---|---|---|---|
| | Yes | | No | | | | | |
| | N | % | N | % | n | % | | |
| Yes | 5 | 2.2 | 2 | 0.9 | 7 | 3.1 | 0,448 | 2.388 |
| No | 112 | 49.6 | 107 | 47.3 | 219 | 96.9 | | |
| Total | 117 | 51.8 | 109 | 48.2 | 226 | 100 | | |

Based on table 10, the results of the cross tabulation of multiple pregnancies with hyperemesis gravidarum showed that of 7 people (3.1%) who had multiple pregnancies where as many as 5 people (2.2%) had hyperemesis gravidarum and 2 people (0.9%) did not have hyperemesis gravidarum. Meanwhile, 219 people (96.9%) did not have multiple pregnancies, of which 112 (49.6%) did not have hyperemesis gravidarum and 107 people (47.3%) did not.

The relationship between multiple pregnancy and hyperemesis gravidarum at Sundari General Hospital in Medan City in 2020 based on the results of the chi-square statistical test analysis obtained p value = 0.448> 0.05 with an OR of 0.454-12,575 (95% CI), this shows that 2 times multiple pregnancy is not affect hyperemesis gravidarum.

Based on table 11, the results of cross tabulation of gestational age with hyperemesis gravidarum showed that of 91 people (40.3%) with gestational age TM 1 where as many as 77 people (34.1%) had hyperemesis gravidarum and 14 people (6.2%) did not have hyperemesis gravidarum. Meanwhile, pregnant women with >TM1 were 135 people (59.7%), of which 40 people (17.7%) had hyperemesis gravidarum and 95 people (42.0%) did not.

**Table 11**
**Cross-tabulation of the Relationship between Gestational Age and Hyperemesis Gravidarum at Sundari General Hospital, Medan City in 2020**

| Gestasi age | Hiperemesis Gravidarum | | | | Jumlah | | P | OR (95%CI) |
|---|---|---|---|---|---|---|---|---|
| | Yaes | | No | | | | | |
| | N | % | N | % | N | % | | |
| ≤TM 1 | 77 | 34.1 | 14 | 6.2 | 91 | 40.3 | 0,000 | 13.063 |
| >TM 1 | 40 | 17.7 | 95 | 42.0 | 135 | 59.7 | | |
| Total | 117 | 51.8 | 109 | 48.2 | 226 | 100 | | |

The relationship between gestational age and hyperemesis gravidarum at Sundari General Hospital in Medan City in 2020 based on the results of the chi-square statistical test analysis obtained p value = 0.000 <0.05 with OR 6.626-25.753 (95% CI), this indicates that gestational age TMI is 13 times affect hyperemesis gravidarum.

**Table 12**
**Results of Multiple Logistic Regression Analysis With Input of All Candidate Variables in the Model**

| Variabel | B | Sig | Exp (B) | 95% CI | |
|---|---|---|---|---|---|
| | | | | Lower | Upper |
| Umur | .645 | .069 | 1.906 | .951 | 3.822 |
| Paritas | 1.747 | .000 | 5.738 | 2.736 | 12.035 |
| Jarak kehamilan | .197 | .582 | 1.218 | .604 | 2.457 |
| Usia Gestasi | 2.219 | .000 | 9.196 | 4.412 | 19.170 |

Based on table 12, it is known that the results of research regarding the factors influencing the occurrence of hyperemesis gravidarum at Sundari General Hospital Medan using binarylogistic statistical tests, it was found that the independent variable that had a p value > 0.05 was age with a p value of 0.069 and a gestational distance p value of 0.582. , while the independent variable that has a p value <0.05 is parity p value 0.000, gestational age p value 0.000. Then the independent variable that has a p value < 0.05, then those that have been declared significant will be re-tested with the second stage of binary logistic regression (logistic regression).

**Table 13**
**Second Stage of Binary Logistics Regression Test**

| Variabel | B | Sig | Exp (B) | 95% CI | |
|---|---|---|---|---|---|
| | | | | Lower | Upper |
| Paritas | 1.770 | .000 | 5.873 | 2.833 | 12.175 |
| Age Gestasi | 2.297 | .000 | 9.943 | 4.859 | 20.348 |

Based on the results of the Binary Logistics statistical test in table 13 above, it shows that of the 2 independent variables tested the results are parity with an Exp (B) value of 5.873 (CI: 95%, 2.833-12.175), gestational age with an Exp (B) value of 9943 (CI: 95%, 4,859-20,348).

Based on the final results of the binary logistic regression test, it was found that the variable gestational age was the most dominant variable influencing the occurrence of hyperemesis gravidarum with an Exp (B) value of 9943 (CI: 95%, 4.859-20.348). This shows that the gestational age factor is 9 times more likely to affect hyperemesis gravidarum.

**DISCUSSION**

Based on the final results of the binary logistic regression test, the variable gestational age was the most dominant variable affecting the occurrence of hyperemesis gravidarum with an Exp (B) value of 9943 (CI: 95%, 4.859-20.348). This shows that gestational age is 9 times more likely to affect hyperemesis gravidarum.

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This research is in line with Atika 2016 with the title the relationship of hyperemesis Gravidarum with maternal age, gestational age, number of children born, and mother's occupation in the Inpatient Room of Dr. RSUP. Hoesin Palembang Province. Based on the results of the study, there was a relationship between maternal age, gestational age, number of children born with hyperemesis gravidarum. While the dominant result is gestational age which has the most dominant effect on hyperemesis gravidarum (Atika.2016)

The problem of maternal gestational age is a factor causing hyperemesis gravidarum, especially in first trimester pregnant women, this is due to the chorionic gonadotropin hormone factor, besides that estrogen and progesterone in the mother's blood during pregnancy play a role (Lestari,2018)

Hormones in the body of pregnant women, such as chorionic gonadotropin hormone, increase until the mother's gestational age is 1 to 16 weeks. So hyperemesis often occurs at 1 to 16 weeks of gestation, but there are some pregnant women who experience continued nausea and vomiting until 40 weeks of gestation.(Rudiyanti,2019).

Based on the results of Susiloningtyas' research in 2021, it was stated that hyperemesis gravidarum often occurs at 1-12 weeks of gestation, this is caused by hormonal changes and an increase in the chorionic gonadotropin hormone in early pregnancy (Susiloningtyas,2021). Changes in hCG hormone levels pass from ovarian control where the ovaries are regulated by the pituitary so that this is what causes the corpus luteum to continue to produce estrogen and progesterone thereby stimulating excessive nausea and vomiting (Sari,2020)

The results of this study also agree with the theory. (Hadningsih,2018)This study is in line with the theory which states that mothers with pregnancies between 1 to 16 weeks of gestation experience nausea and vomiting. This is due to the hormone HCG (Human Chorionic Gonadotropin) which increases in early pregnancy. (23) HCG stimulates the production of estrogen in the ovaries, it is known that estrogen increases nausea and vomiting HCG can also stimulate the thyroid gland to produce Thyroid Stimulating Hormone (TSH). High TSH levels also trigger excessive nausea and vomiting (Paskana,2020)

Based on the results of this study, it was found in agreement with the theory by stating that excessive nausea and vomiting often occurs in young pregnant women or pregnant women with a gestational age of 1-16 weeks, this occurs due to hormonal changes, in addition to an increase in the chorionic gonadotropin hormone in the early stages of pregnancy. (Nuryani,22021) Changes in the hormone hCG also pass through the control of the ovaries in the pituitary so that this is what causes the corpus luteum to continue to secrete estrogen and progesterone so that this is the cause of excessive nausea and vomiting so that the increase in hormones during pregnancy in the first trimester of pregnancy can triggers the occurrence of hyperemesis gravidarum. (Ritawani,2020) Based on the results of the study, it is seen that there is a togetherness between theory and research with the statement that hyperemesis gravidarum has a relationship with gestational age, namely in the first trimester of pregnancy. (Kurniati,2018) Because the HCG hormone increases in the blood mother in the first trimester of pregnancy. (Cholifah,2021) Increased pregnancy hormones can trigger hyper emesis gravidarum. So it can be concluded that the most dominant factor influencing hyperemesis in pregnant women is gestational age. 9 times gestational age affects hypermesisi gravidarum at Sundari General Hospital, Medan City.

## CONCLUSION

Based on the research results obtained that: There is a relationship between age, parity, gestational age, gestational age, with hyperemesis gravidarum at Sundari General Hospital, Medan City. And there is no relationship between multiple pregnancy and hyperemesis gravidarum at Sundari General Hospital, Medan City.The variable gestational age is the most dominant variable influencing the occurrence of hyperemesis gravidarum with an Exp (B) value of 9943 (CI : 95%, 4.859-20.348).

## SUGGESTION

It is hoped that health workers, especially midwives, will provide promotions to prepare for pregnancy as best they can and prevent hyperemesis gravidarum.

## DAFTAR PUSTAKA

Diana S, Mail E. Buku Ajar Asuhan Kebidanan, Persalinan, Dan Bayi Baru Lahir. Cv Oase Group (Gerakan Menulis Buku Indonesia); 2019.

Rofi'ah S, Widatiningsih S, Arfiana A. Studi Fenomenologi Kejadian Hiperemesis Gravidarum Pada Ibu Hamil Trimester I. J Ris Kesehat. 2019;8(1):41–52.

Sari Bp, Yuniarti Y, Heryati K, Mizawati A, Baska Dy. Pengaruh Pemberian Aromaterapi Lavender Dalam Mengurangi Emesis Gravidarum Pada

Ibu Hamil Trimester I Di Wilayah Kerja Puskesmas Telaga Dewa Kota Bengkulu Tahun 2021. Poltekkes Kemenkes Bengkulu; 2021.

Sari Bp, Lestari Pp. Determinant For Implementation Of Early Breasting In Pmb Of Banjarmasin City In 2019. Heal Media. 2019;1(1):14–8.

Handayani S, Aiman U. Analisis Kejadian Hiperemesis Gravidarum (Heg) Berdasarkan Karakteristiknya. Babul Ilmi J Ilm Multi Sci Kesehat. 2018;9(1).

Yusuf N, Wahyuni S. Faktor-Faktor Yang Mempengaruhi Kejadian Hiperemesis Gravidarum (Studi Kasus Di Rumah Sakit Umum Daerah Dr Zainoel Abidin Banda Aceh). Maj Kesehat Masy Aceh. 2018;1(2):94–100.

Abidah Sn, Nisa F. Faktor-Faktor Yang Berhubungan Dengan Hiperemesis Gravidarum Pada Ibu Hamil Di Rb Zakat Surabaya. Embrio J Kebidanan. 2019;11(2):84–101.

Ibrahim Ia, Syahrir S, Anggriati T. Faktor-Faktor Yang Berhubungan Dengan Hyperemesis Gravidarum Pada Ibu Hamil Di Rsud Syekh Yusuf Tahun 2019. Al Gizzai Public Heal Nutr J. 2021;59–70.

Nurbaity Ad, Candra A, Fitranti Dy. Faktor Risiko Hiperemesis Gravidarum Pada Ibu Hamil Di Semarang. J Nutr Coll. 2019;8(3):123–30.

Pakpahan Alh. Hubungan Dukungan Suami Dengan Penanganan Hiperemesis Gravidarum Pada Ibu Hamil Trimester I Di Balai Kesehatan Ibu Anak Desa Mela I Kabupaten Tapanuli Tengah Tahun 2018. Institut Kesehatan Helvetia; 2018.

Astuti Maya. Buku Pintar Kehamilan. Cetakan Pe. Monica E, Editor. Jakarta: Buku Kedokteran Egc; 2017.

Mudlikah S, Sutjiati Dh, Ningrum Ni. Hubungan Pengetahuan Dan Sikap Ibu Hamil Terhadap Mual Muntah Kehamilan Dengan Waktu Mual Muntah Kehamilan Di Puskesmas Sumobito Kota Jombang. J Kebidanan Midwiferia. 2019;5(1):22–7.

Khairiah R, Tridiyawati F, Yanuarti T. Pengetahuan Ibu Hamil Trimester I Dalam Upaya Penanganan Mual Muntah. J Antara Kebidanan. 2021;4(1):38–42.

Rinata E, Ardillah Fr. Penanganan Emesis Gravidarum Pada Ibu Hamil Di Bpm Nunik Kustantinna Tulangan-Sidoarjo. 2017;

Muchtar As. Hubungan Umur Dan Paritas Ibu Hamil Dengan Kejadian Hiperemesis Gravidarum. J Ilm Kesehat Diagnosis. 2018;12(6):598–602.

Susiloningtyas I. Pemberian Zat Besi (Fe) Dalam Kehamilan. Maj Ilm Sultan Agung. 2018;50(128):73–99.

Kurniasih H, Zuhriyatun F, Faizah Sn. Efektivitas Kombinasi Ekstrak Jahe Dan Piridoksin Untuk Mengurangi Mual Muntah Ibu Hamil. J Sains Kebidanan. 2019;1(1):1–6.

Armalini R, Prasetyaningsih P. Hubungan Pengetahuan Dan Sikap Ibu Hamil Dengan Kejadian Mual Muntah Pada Kehamilan Trimester Pertama Di Poskesdes Ampalu Kota Pariaman Bidan Helfiati, Amd. Keb. J Surya Med. 2020;6(1):70–6.

Lubis Ics. Gambaran Manifestasi Klinis Ibu Hamil Dengan Hiperemesis Gravidarum Yang Dirawat Di Rumah Sakit Umum Daerah Dr. Zainoel Abidin Banda Aceh. Etd Unsyiah. 2015;

Sugiyono Fx. Neraca Pembayaran: Konsep, Metodologi Dan Penerapan. Vol. 4. Pusat Pendidikan Dan Studi Kebanksentralan (Ppsk) Bank Indonesia; 2017.

Atika I, Putra Hk, Thaib Sh. Hubungan Hiperemesis Gravidarum Dengan Usia Ibu, Usia Gestasi, Paritas, Dan Pekerjaan Pada Pasien Rawat Inap Di Rsup Dr. Moh. Hoesin Palembang. J Kedokt Dan Kesehat Publ Ilm Fak Kedokt Univ Sriwij. 2016;3(3):166–71.

Lestari Rm. Hubungan Tingkat Pengetahuan Ibu Hamil Primigravida Trimester I Tentang Ketidaknyamanan Mual Muntah Dengan Upaya Penanganannya Di Bps Ny. Endang R., S. St Salatiga. J Ilm Kesehat Ar-Rum Salatiga. 2018;2(2):27–34.

Rudiyanti N, Rosmadewi R. Hubungan Usia, Paritas, Pekerjaan Dan Stres Dengan Emesis Gravidarum Di Kota Bandar Lampung. J Ilm Keperawatan Sai Betik. 2019;15(1):7–18.

Susiloningtyas I. Pemberian Zat Besi (Fe) Dalam Kehamilan. Maj Ilm Sultan Agung. 2021;50(128):73–99.

Sari N. Literatur Review Hubungan Hiperemesis Gravidarum Dengan Gemeli. Progr Stud Diploma Tiga Kebidanan Fak Kesehat Univ Sari Mulia Banjarmasin. 2020;

Hadiningsih Ta, Anggraeni Ie. Hubungan Anemia Ibu Bersalin Dengan Kejadian Bblr Di Rsi Pku Muhammadiyah Singkil. J Ilmu Keperawatan Dan Kebidanan. 2021;12(1):130–3.

Paskana K, Gusnidarsih V. Hubungan Paritas Dengan Kejadian Hiperemesis Gravidarum Pada Ibu Hamil. J Asuhan Ibu Dan Anak. 2020;5(2):25–9.

Nuryani Anj, Nuryani N. Hubungan Tingkat Pendidikan Dan Pengetahuan Ibu Terhadap

Aktivitas Seksualitas Selama Kehamilan. Nusant Hasana J. 2021;1(1):51–8.

Ritawani E. Hubungan Tingkat Kecemasan Ibu Dengan Emesis Gravidarum Pada Ibu Hamil Trimester I Di Puskesmas Payung Sekaki. J Bidan Komunitas. 2020;3(1):36–43.

Kurniati Y. Karakteristik Ibu Hamil Yang Mengalami Hiperemesis Gravidarum. J Kebidanan. 2018;8(2).

Cholifah N, Tristanti I. Hubungan Umur, Jenis Kelamin, Pekerjaan, Pendidikan Dengan Pharmacovigilance Program Pemberian Obat Filariasis Pada Warga Desa Pecangaan Kecamatan Batangan Kabupaten Pati. Proceeding Of The Urecol. 2021;1089–92.