

Case Study On Primigravida In The First Trimester With Emesis Gravidarum In The Tongguh Community Health Center Area Bangkalan Regency

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ABSTRAK

Kehamilan merupakan proses fisiologis yang ditandai dengan perubahan baik fisik maupun psikologis. Perubahan tersebut dapat menimbulkan ketidaknyamanan, salah satunya yaitu mual dan muntah atau disebut dengan *emesis gravidarum*. Prevelensi ibu hamil dengan *emesis gravidarum* di Puskesmas Tongguh sejak 8 Januari – 2 Februari 2024 yaitu 4 dari 10 ibu hamil trimester I (TM I) atau sebesar 40%. Studi kasus ini bertujuan untuk mengetahui gambaran kejadian *emesis gravidarum* pada primigravida TM I meliputi tanda dan gejala, faktor risiko, penyulit serta penatalaksanaan di wilayah Puskesmas Tongguh. Desain studi kasus yaitu *multiple case design* dengan dua responden yang memiliki kriteria sama yaitu primigravida TM I dengan *emesis gravidarum*. Pengumpulan data dilakukan melalui wawancara dan dokumentasi rekam medis. Hasil studi kasus ini bahwa tidak semua responden mengalami tanda dan gejala *emesis gravidarum* seperti mual, muntah, tubuh lemas dan lelah, penurunan nafsu makan dan berat badan. Faktor risiko usia, pola nutrisi, riwayat gastritis dan stress bukan merupakan faktor utama penyebab *emesis gravidarum*. Kedua responden tidak mengalami penyulit *emesis gravidarum*. Kedua responden telah melaksanakan sebagian dari penatalaksanaan farmakologi maupun non farmakologi. Diperlukan adanya asuhan komprehensif untuk mengatasi *emesis gravidarum* agar ketidaknyamanan tersebut bisa segera teratasi diantaranya yaitu pendekatan interpersonal agar tercipta komunikasi yang efektif dalam menerima dan menyikapi keluhan yang dirasakan ibu hamil, pendidikan kesehatan tentang pemenuhan pola nutrisi yang sehat. Pencegahan terjadinya komplikasi melalui asuhan komplementer seperti yoga, senam, akupresur dan aromaterapi akan membantu ibu hamil dengan *emesis gravidarum* dalam meringankan semua keluhan.

Keywords:

Primigravida, Emesis Gravidarum, Risk Factors

ABSTRACT

Pregnancy is a physiological process characterized by both physical and psychological changes. These changes can cause discomfort, one of which is nausea and vomiting or called *emesis gravidarum*. The prevalence of pregnant women with *emesis gravidarum* at Tongguh Health Center from January 8 to February 2, 2024 was 4 out of 10 pregnant women in the first trimester (TM I) or 40%. This case study aims to determine the incidence of *emesis gravidarum* in primigravida TM I including signs and symptoms, risk factors, complications and management in the Tongguh Health Center area. The case study design is *multiple case design* with two respondents who have the same criteria, namely primigravida TM I with *emesis gravidarum*. Data collection was done through interviews and medical record documentation. The results of this case study show that not all respondents experienced signs and symptoms of *emesis gravidarum* such as nausea, vomiting, weakness and fatigue, decreased appetite and weight. Risk factors of age, nutritional patterns, history of gastritis and stress are not the main factors causing *emesis gravidarum*. Both respondents did not experience the effects of *emesis gravidarum*. Both respondents had carried out some of the

pharmacological and non-pharmacological treatments. Comprehensive care is needed to overcome emesis gravidarum so that the discomfort can be resolved immediately, including an interpersonal approach to create effective communication in receiving and responding to complaints felt by pregnant women, health education about fulfilling healthy nutritional patterns. Prevention of complications through complementary care such as yoga, gymnastics, acupressure and aromatherapy will help pregnant women with emesis gravidarum to relieve all complaints.

Introduction

Pregnancy is a physiological process characterized by both physical and psychological changes. These changes can lead to issues, one of which is nausea and vomiting. Nausea and vomiting during pregnancy, known as emesis gravidarum, is an uncomfortable sensation in the stomach that creates a feeling of wanting to vomit, sometimes accompanied by vomiting occurring less than five times in 24 hours. Emesis gravidarum is often referred to as morning sickness because it frequently happens in the morning; however, nausea and vomiting can occur at any time, even throughout the day (I Gusti Ayu Putri Satria Aryasih, 2022). Emesis gravidarum is common in early pregnancy or the first trimester, especially in primigravida. Primigravida refers to a woman who is pregnant for the first time. Primigravida experiencing emesis gravidarum may do so because the mother lacks experience in dealing with the physiological and psychological changes of pregnancy (Nur Alfi, 2022).

According to the World Health Organization (WHO) in 2020, the incidence of emesis gravidarum is at least 14% among all pregnant women. In Indonesia, among 2,203 pregnancies, 543 mothers experienced emesis gravidarum. In East Java in 2020, 67.9% of pregnant women experienced emesis gravidarum. The occurrence of emesis gravidarum among pregnant women ranges from 60-80% in primigravida cases and 40-60% in multigravida cases (Saiyah, 2023). Based on an initial survey conducted by the author at the Tongguh Community Health Center in Bangkalan Regency from January 8 to February 2, 2024, there were 10 primigravida mothers in their first trimester who visited. Among these 10 pregnant women, 40% complained of nausea and vomiting. This indicates a relatively high incidence of emesis gravidarum among primigravida mothers at the Tongguh Community Health Center in Bangkalan Regency.

Emesis gravidarum in pregnant women is caused by changes in the endocrine system during pregnancy, particularly an increase in



the hormone Human Chorionic Gonadotropin (HCG) in the serum from the developing placenta (Haridawati, 2020). Additionally, increased estrogen in the digestive system can raise stomach acidity, which triggers emesis gravidarum in pregnant women. Risk factors for emesis gravidarum include mothers who are very young (<20 years) or very old (>35 years), first pregnancies (primigravida), psychological factors such as unwanted pregnancies and lack of support from partners leading to stress. Symptoms can be exacerbated if the mother has a history of gastritis, unhealthy eating habits such as consuming high-sugar and oily foods, alcohol, and smoking (Maulana, 2021).

Untreated emesis gravidarum can progress to hyperemesis gravidarum. Hyperemesis gravidarum is a condition where the mother vomits continuously whenever she eats or drinks, resulting in weakness, fatigue, a weight loss of more than 5% from pre-pregnancy weight, and dehydration. Hyperemesis gravidarum not only affects the mother but also has implications for the fetus, including miscarriage, low birth weight (LBW), premature birth, and intrauterine growth restriction (IUGR) (Evi Susanti, 2019).

Solutions to address and prevent emesis gravidarum from continuing into later trimesters include providing maternity care that offers information about the causes of emesis gravidarum and ways to manage it, both pharmacologically and non-pharmacologically (Dita Kristiana, 2021). Pharmacological interventions may include providing Vitamin B6 and other medications safe for pregnant women. Non-pharmacological efforts involve advising mothers to eat healthy foods, avoid oily foods and caffeinated drinks like coffee, and consume ginger tea. Care provided should continue into the subsequent trimester to prevent complications from emesis gravidarum.

Method

The method in this case study uses a multiple case design with two respondents who share the same criteria: primigravida in the first trimester with emesis gravidarum. Data collection was conducted through interviews and documentation studies. Interviews were carried out using a questionnaire covering signs and symptoms (nausea, vomiting, decreased appetite, fatigue, and weight loss), risk factors (age, nutrition patterns, history of gastritis, and stress), complications (hyperemesis

gravidarum), and management (pharmacological, including taking Vitamin B6 and ondansetron tablets, and non-pharmacological, such as avoiding oily foods, drinking ginger tea, and avoiding caffeinated beverages). Documentation studies involved medical records detailing the history of medication therapy provided to the respondents. The results of the case study will be presented in the form of a matrix table and analyzed descriptively.

Results

A. Signs and Symptoms of *Emesis Gravidarum*

Table 1.1 Signs and Symptoms of *Emesis Gravidarum*

Signs and Symptoms	Genesis	
	Respondent 1	Respondent 2
Nausea	Morning and evening sickness	Morning and nighttime nausea
Vomiting	3 times a day	2 times a day
Appetite	Experiencing a decrease in appetite	Experience an increase in appetite
Body feels tired and weak	Often feeling tired and weak	Often feeling tired and weak
Weight loss <5% of pre-pregnancy weight	Weight loss of 2% of pre-pregnancy weight	Weight loss of 5% of pre-pregnancy weight

Source : Primary Data, 2024

B. Risk Factors for *Emesis Gravidarum*

Table 1.2 Risk Factors *Emesis Gravidarum* (Age)

Risk Factors	Genesis	
	Respondent 1	Respondent 2
Age	25 years (20-35 years)	30 years (20-35 years)

Source : Primary Data, 2024

Table 1.3 Risk Factors *Emesis Gravidarum* (Nutrition Pattern)

Risk Factors	Genesis	
	Respondent 1	Respondent 2
Nutrition Pattern		
- Late for meals	Often	Never
- Eating oily food	Often	Rare
- Consuming caffeinated drinks/coffe	Never	Never

Source : Primary Data, 2024

Table 1.4 Risk Factors *Emesis Gravidarum* (History of Gastritis)

Risk Factors	Genesis	
	Responden 1	Responden 2
History of Gastritis	Has a history of gastritis	Has a history of gastritis

Source : Primary Data, 2024

Table 1.5 Risk Factors *Emesis Gravidarum* (Stress)

Risk Factors	Genesis	
	Respondent 1	Respondent 2
Stress	Moderate stress	Severe stress

Source: Primary Data, 2024

C. Complications of *Emesis Gravidarum*

Table 1.6 Complications of *Emesis Gravidarum*

Signs and Symptoms	Genesis	
	Respondent 1	Respondent 2
<i>Hyperemesis Gravidarum</i>		
Feeling weak	Not feeling weak	Not feeling weak
Weight loss >5% of pre-pregnancy weight	Weight loss 4% of pre-pregnancy weight	Weight gain 7,5% of pre-pregnancy weight
Pain in solar plexus	No pain	No pain
No appetite	There is an appetite	There is an appetite
Increased pulse	Pulse : 80x/min	Pulse : 64x/min
Decreased blood pressure	BP : 110/70 mmHg	BP : 110/70 mmHg
Dry Tongue	Tongue does not dry out	Tongue does not dry out
Sunken eyes	Eyes are not sunken	Eyes are not sunken

Source : Primary Data, 2024

D. Management of *Emesis Gravidarum*

Table 1.7 Management *Emesis Gravidarum*

Management	Genesis		
	Respondent 1	Respondent 2	
Pharmacology	Taking vitamin B6	Routine	Routine
	Taking ondansetron tablets	Never	Never
Non-Pharmacology	Avoiding greasy food	Not done	Done
	Drinking ginger water decoction	Done	Not done
	Avoid consuming coffe/latte	Done	Done

Sumber : Primary Data and Secondary Data (Patient Medical Records), 2024

Discussion

A. Signs and Symptoms of *Emesis Gravidarum*

Based on the results of the case study conducted, Respondent 1 experienced more signs and symptoms typical of pregnant women with *emesis gravidarum*, including nausea, vomiting three times a day, decreased appetite, fatigue, and weight loss. This aligns with the opinion of Utamingtyas F (2020), who stated that the signs and symptoms experienced by pregnant women with *emesis gravidarum* include feelings of nausea and vomiting that usually occur in the morning or at any time, with vomiting frequency of less than five times a day, decreased appetite, easy fatigue, and weight loss of less than 5% from pre-pregnancy weight.

Meanwhile, Respondent 2 experienced only some signs and symptoms of *emesis gravidarum*, including nausea, vomiting twice a day, fatigue, and weakness, but showed an increase in appetite and weight gain. Respondent 2 stated that her appetite during pregnancy increased, eating four times a day. After examination, Respondent 2's weight increased by 4 kg from her pre-pregnancy weight. This could occur because

when a mother feels overwhelmed, tired, weak, and stressed, she may cope by eating foods she enjoys, leading to increased meal frequency and weight gain. This aligns with the views of Devita and Zuhriya (2021), who noted that individual responses to stress vary concerning eating habits. When the body experiences stress, it signals the hypothalamus to instruct the adrenal glands to release adrenaline and cortisol. Cortisol has effects that increase appetite.

B. Risk Factors for *Emesis Gravidarum*

1. Age

Based on the results of the case study conducted, Respondent 1 is 25 years old and Respondent 2 is 30 years old. This data indicates that both Respondent 1 and Respondent 2 are within the age range that does not have a risk of experiencing emesis gravidarum, specifically ages 20-35.

From the explanation above, emesis gravidarum can occur in the age range of 20-35 years because, in the first trimester of pregnancy, there is an increase in the hormones progesterone and HCG (Human Chorionic Gonadotropin), which triggers nausea and vomiting, including in individuals aged 20-35. This is consistent with the opinion of Asrianti Safitri (2023), who stated that emesis gravidarum occurs

due to the increase in progesterone and HCG hormones, which causes decreased gastric motility and slower gastric emptying, stimulating the Chemoreceptor Trigger Zone, the center for nausea and vomiting in the Medulla Oblongata, leading to nausea and vomiting.

2. Nutritional Pattern

Based on the case study conducted, the nutritional pattern of Respondent 1 is more at risk for emesis gravidarum because she often eats late and frequently consumes oily foods, compared to Respondent 2, who never eats late and rarely consumes oily foods. This is consistent with the opinion of Maulana (2021), who stated that emesis gravidarum can occur if a pregnant woman adopts poor eating habits, such as eating late, frequently consuming oily foods, and often consuming caffeinated beverages like coffee.

3. History of Gastritis

Based on the case study conducted, both Respondent 1 and Respondent 2 have a history of gastritis prior to pregnancy. This data indicates that the history of gastritis in both respondents is a risk factor for the occurrence of emesis gravidarum. A history of gastritis before pregnancy poses a significant risk of recurrence and can trigger emesis gravidarum. This aligns with the

opinion of Merita and Sapitri (2018), who noted that increased stomach acid production due to hormonal changes, particularly estrogen, in the digestive system of pregnant women, along with a prior history of gastritis, can irritate the gastric mucosal lining and may progress to peptic ulcers. This can lead to sensations of pain, nausea, and even vomiting.

4. Stress

Based on the results from the DASS 42 (Depression Anxiety Stress Scales) questionnaire completed by Respondent 1 and Respondent 2, it was found that both respondents have different levels of stress. Respondent 1 scored 19, indicating a moderate level of stress, while Respondent 2 scored 31, indicating a severe level of stress. Pregnant women with many concerns or stress tend to be more sensitive, which can trigger nausea and vomiting. This aligns with the opinion of Aida Fitriani (2022), who stated that nausea and vomiting are often associated with the mother's psychological condition. Mothers experiencing psychological stress, such as anxiety, will have an increased incidence of nausea and vomiting during pregnancy.

C. Complications of Emesis Gravidarum

Based on the results of observations and

physical examinations conducted during the second visit on April 21, 2024, it was found that the signs and symptoms in Respondent 1 and Respondent 2 are still consistent with emesis gravidarum and have not yet progressed to signs of hyperemesis gravidarum. From this description, it can be concluded that mothers with emesis gravidarum will not experience negative effects if they receive appropriate management, both pharmacologically and non-pharmacologically. This is in line with the opinion of I Gusti Ayu (2022), who stated that nausea and vomiting, if not managed properly, can lead to more severe and persistent symptoms during early pregnancy, resulting in dehydration, electrolyte disturbances, or nutritional deficiencies known as hyperemesis gravidarum.

D. Management of *Emesis Gravidarum*

1. Pharmacology

a. Taking Vitamin B6

Based on the case study conducted, both Respondent 1 and Respondent 2 have been routinely taking Vitamin B6 provided during their ANC examinations at Puskesmas Tongguh. Regular intake of Vitamin B6 can enhance metabolism, including the formation of amino acids in the body, thereby alleviating nausea and vomiting in

pregnant women. This is consistent with the opinion of Haryanah and Annah (2023), who stated that Vitamin B6 plays a role in body metabolism, such as the normal functioning of the nervous system, hormone regulation, tissue repair, and amino acid formation. Vitamin B6 works by processing amino acids in the body, which helps reduce the response to nausea and vomiting.

b. Taking Ondansetron Tablets

Based on the case study conducted, Respondent 1 and Respondent 2 have not yet consumed ondansetron tablets because the Puskesmas does not provide ondansetron for oral intake. Instead, the Puskesmas provided antacid tablets for pregnant women with emesis gravidarum. Antacid tablets are given because they can relieve symptoms of excess stomach acid or digestive disorders, such as nausea and vomiting. However, it is important to note that there are some side effects that may arise, such as diarrhea and constipation.

This aligns with the opinion of Ersalia and Ermawati (2020), who stated that the side effects depend on the active ingredients contained in the antacids. Formulations containing magnesium can cause diarrhea, while those containing aluminum can lead to constipation. Therefore, a combination of

both is used to mitigate the side effects produced by each.

2. Non Pharmacology

a. Avoiding Oily Foods

Based on the case study conducted, Respondent 2 has avoided oily foods, while Respondent 1 has not yet done so. Frequently consuming oily foods can slow down the digestive process because the digestion of fats takes longer, which can trigger nausea and even vomiting.

This aligns with the opinion of Ali and Lusiani (2023), who stated that fatty foods require more time to be digested because they must be broken down to be absorbed by the small intestine. The longer food remains in the stomach, the greater the production of stomach acid, which can lead to nausea and vomiting. Therefore, one strategy to reduce nausea and vomiting is to avoid consuming oily foods during pregnancy.

b. Consuming Ginger Tea

Based on the case study conducted, Respondent 1 has regularly consumed ginger tea, while Respondent 2 has not yet tried it. The administration of ginger tea can alleviate discomfort in the stomach, thereby reducing feelings of nausea and vomiting.

This aligns with the opinion of Cindy and Risa (2021), who stated that ginger

contains essential oils such as zingiberene (zingiberen), zingiberol, bisabolene, curcumin, gingerol, flavonoids, vitamin A, and bitter resin that can block serotonin—a neurotransmitter synthesized in serotonergic neurons in the central nervous system and in enterochromaffin cells in the digestive tract. This property is believed to provide comfort in the stomach and help alleviate nausea and vomiting.

c. Avoiding Caffeinated Beverages

Based on the case study conducted, both Respondent 1 and Respondent 2 have avoided caffeinated beverages like coffee. By avoiding coffee, the levels of stomach acid do not easily increase. In contrast, frequent consumption of coffee can lead to elevated stomach acid levels, resulting in feelings of nausea and vomiting.

This aligns with the opinion of Desti and Hanifah (2020), who stated that coffee contains caffeine compounds. Caffeine in coffee can accelerate the production of stomach acid, leading to excess gas in the stomach and causing bloating, which can trigger feelings of nausea and vomiting. Therefore, one strategy to reduce nausea and vomiting is to avoid caffeinated beverages, including coffee.

Conclusion

This case study aims to identify the signs and symptoms, risk factors, complications, and management in pregnant women with emesis gravidarum. Based on the results and discussion, it was found that not all respondents experienced signs and symptoms of emesis gravidarum, such as nausea, vomiting, weakness and fatigue, decreased appetite, and weight loss. The risk factors of age, nutritional patterns, history of gastritis, and stress were not the primary causes of emesis gravidarum. Both respondents did not experience complications related to emesis gravidarum. Both respondents have implemented some aspects of pharmacological and non-pharmacological management.

Abbreviation

WHO	: World Health Organization
HCG	: Human Chorionic Gonadotropin
BBLR	: Berat Badan Lahir Rendah
IUGR	: Intrauterine Growth Restriction
KIE	: Komunikasi Informasi dan Edukasi
LH	: Luteinizing Hormone
HEG	: Hyperemesis Gravidarum
KET	: Kehamilan Ektopik Terganggu
PTG	: Penyakit Trofoblas Gestasional
IUFD	: Intrauterine Fetal Death
PUQE	: Pregnancy Unique Quantification



of Emesis

TTV : Tanda-Tanda Vital

KIA : Kesehatan Ibu dan Anak

EC : Ethical Clearance

DASS : Depression Anxiety Stress Scales

Ethics Approval and Consent to Participate

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References

1. Aida Fitriani, A. H. (2022). *Buku Ajar Asuhan Kehamilan Jilid Iii*. Jakarta: Pt Mahakarya Citra Utama Group.
2. Ajeng Eka Septyaningrum, D. H. (2022). Pengaruh Tingkat Pendidikan Terhadap Penggunaan Antasida Di Dusun Kepek Bantul Periode Januari 2022. *Forte Jurnal*, 137-142.
3. Ali Husen, L. T. (2023). Pola Makan Mahasiswa Dengan Gastritis Yang Terlibat Dalam Kegiatan Organisasi Kemahasiswaan Di Universitas Islam Negeri Jakarta. *Clavaria Medical Journal*, 68-75.
4. Asrianti Safitri Muchtar, I. N. (2023). Manajemen Asuhan Kebidanan Antepartum Ny "R" Gestasi 7 Minggu 2 Hari Dengan Emesis Gravidarum Di Upt Puskesmas Bajoe Kabupaten Bone. *Jurnal Midwifery*, 1-10.
5. Cindy Eka Prastika, R. P. (2021). Pemberian Rebusan Jahe Untuk Mengatasi Mual Muntah Pada Kehamilan Trimester I. *Current Midwifery Journal*, 62-69.
6. Dartiwen, S. N. (2019). *Asuhan Kebidanan Pada Kehamilan*. Yogyakarta: Andi.
7. Desti Maharani, H. A. (2020). Hubungan Pola Makan Dan Konsumsi Kopi Dengan Kejadian Gastritis Pada Lansia Di Kelurahan Manisrejo Kecamatan Taman Kota Madiun. *Jurnal Ilmiah Ilmu Keperawatan Dan Ilmu Kesehatan Masyarakat*, 56-63.
8. Devita Madiuw, W. T. (2021). Strategi Penanganan Mual Muntah Ibu Hamil Melalui Kombinasi Intervensi Non Farmakologi. *Moluccas Health Journal*, 46-53.
9. Devita Miliandani, Z. M. (2021). Hubungan Tingkat Stress Dengan Status Gizi Mahasiswa Tingkat Akhir Di Fakultas Ilmu Kesehatan Universitas Islam As-Syafi'iyah Jakarta Timur Tahun 2021. *Jurnal Afiat Kesehatan Dan Anak*, 31-43.
10. Dita Kristiana, T. H. (2021). Penatalaksanaan Emesis Gravidarum Di Yogyakarta. *Jurnal Of Health Studies*, 124-130.
11. Ersalia Susetyo, E. D. (2020). Profil Pengetahuan Mahasiswa Institut Teknologi Sepuluh Nopember Terhadap Penggunaan Obat



- Antasida. *Jurnal Farmasi Komunitas*, 48-55.
12. Evi Susanti, F. N. (2019). Manajemen Asuhan Kebidanan Antenatal Pada Ny "S" Dengan Hiperemesis Gravidarum Tingkat Ii Di Rs Tni Angkatan Laut Jala Ammari Pada Tanggal 27 Mei - 18 Juli 2018. *Jurnal Midwifery*, 79-91.
 13. Farida Utaminingtyas, L. P. (2020). Gambaran Pengetahuan Ibu Hamil Tentang Emesis Gravidarum. *Bali Health*, 37-43.
 14. Haridawati. (2020). Pengaruh Jahe Hangat Dalam Mengurangi Emesis Gravidarum Di Wilayah Kerja Puskesmas Harapan Raya Pekanbaru. *Jurnal Ilmu Kebidanan*, 1-7.
 15. Haryanah, A. H. (2023). Efektifitas Kombinasi Aromaterapi Lemon Dan Piridoksin (B6) Terhadap Emesis Gravidarum Di Puskesmas Mawasangka Buton Tengah. *Jurnal Kebidanan*, 2686-2691.
 16. I Gusti Ayu Putri Satria Aryasih, N. P. (2022). Pemberian Aromaterapi Peppermint Untuk Mengurangi Mual Muntah Pada Ibu Hamil Trimester I. *Jurnal Riset Kesehatan Nasional*, 139-145.
 17. Irdan, H. (2020). Identifikasi Potensi Bahaya, Penilaian, Dan Pengendalian Penyakit Anemia Pada Ibu Hamil Di Wilayah Kerja Puskesmas Puuwatu Kota Kendari. *Jurnal Ilmiah Karya Kesehatan*, 84-89.
 18. Karlinah, N. (2019). Pengetahuan Ibu Hamil Tentang Dampak Kafein Terhadap Kehamilan Dan Janin Di Desa Sei Rotan Kecamatan Percut Seltuan Kabupaten Deli Serdang Tahun 2016. *Jurnal Ilmu Kebidanan (Journal Of Midwifery Sciences)*, 89-94.
 19. Kasmianti, D. P. (2023). *Asuhan Kehamilan*. Malang: Pt Literasi Nusantara Abadi Grup.
 20. Maria Paulina Usboko, S. A. (2020). Analisis Emesis Gravidarum Dengan Kejadian Anemia Pada Ibu Gravida Di Puskesmas Mrican Kota Kediri. *Jurnal Of Health Science Comunity*, 1(2).
 21. Maulana, M. (2021). *Penyakit Kehamilan Dan Pengobatannya*. Yogyakarta: Kata Hati.
 22. Merita, W. I. (2018). Hubungan Tingkat Stress Dan Pola Konsumsi Dengan Kejadian Gastritis Di Puskesmas Pakuan Baru Jambi. *Jurnal Akademika Baiturrahim*, 51-58.\
 23. Munisah, R. I. (2022). Faktor Tingkat Pendidikan, Usia, Paritas, Status Pekerjaan, Dan Riwayat Emesis Gravidarum Mempengaruhi Terjadinya Emesis Gravidarum Pada Ibu Hamil Trimester I. *Indonesian Journal Of Midwifery Today*, 45-53.
 24. Mutoharoh, S. &. (2023). Efektivitas Akupresur Titik Neiguan (Pc6) Terhadap Emesis Gravidarum Pada Ibu Hamil Trimester I Di Bpm Dwi Eni Kecamatan Sumbang Banyumas. *Jurnal Bina Cipta Husada*, 11-24.



25. Nani Hijrawati, Y. O. (2023). Faktor-Faktor Yang Berhubungan Dengan Kejadian Hiperemesis Gravidarum Pada Ibu Hamil Di Poliklinik Rumah Sakit Islam Banjarmasin. *Jurnal Keperawatan Suaka Insan*, 106-114.
26. Nilam Rizky Yulia Efendi, J. S. (2022). Asuhan Kebidanan Pada Ibu Hamil Dengan Ketidaknyamanan Trimester Iii Di Pmb Ernita Kota Pekanbaru Tahun 2022. *Jurnal Kebidanan Terkini*, 275-279.
27. Nur Alfi, K. K. (2022). Faktor-Faktor Yang Mempengaruhi Emesis Gravidarum Pada Ibu Hamil Trimester 1. *Majalah Kesehatan Indonesia*, 13-18.
28. Revin Raga Hernandini, M. (2023). Aplikasi Aromaterapi Papermint Terhadap Mual Dan Muntah Pada Ibu Hamil Trimester I. *Ners Muda*, 1-8.
29. Rismayani. (2022). *Modul Komplikasi Kehamilan, Persalinan, Nifas Dan Bbl*. Bengkulu: Stikes Sapta Bakti.
30. Saiyah, T. R. (2023). Efektivitas Ekstrak Jahe Merah Terhadap Pengurangan Emesis Pada Ibu Hamil Trimester 1 Di Puskesmas Kwanyar Bangkalan. *Seminar Nasional Hasil Riset Dan Pengabdian*, 2828-2835.
31. Santy Irene, A. S. (2020). *Buku Ajar Asuhan Kebidanan Patologi*. Banyumas: Cv. Pena Persada.
32. Septi Indah, F. H. (2022). *Emesis Gravidarum Dengan Akupresur*. Pekanbaru: Taman Karya.
33. Simbolon, M. N. (2022). Hubungan Antara Gastritis, Stress, Dan Dukungan Suami Dengan Sindrom Hyperemesis Gravidarum Di Pmb M Tahun 2022 Kabupaten Sukabumi Tahun 2022. *Jurnal Ilmiah Bidang Sosial Ekonomi Budaya Teknologi Dan Pendidikan*, 779-786.
34. Siti Cholifah, T. E. (2019). Aromaterapi Lemon Menurunkan Mual Muntah Pada Ibu Hamil Trimester I. *Jurnal Kebidanan Midwifery*, 1-4.
35. Sriyani, I. T. (2019). Pengaruh Minuman Jahe Terhadap Pengurangan Emesis Gravidarum Pada Ibu Hamil Trimester I Di Praktik Mandiri Bidan Emiliawati Karya Penggawa Pesisir Barat. *Jurnal Human Care*, 584-581.
36. Teresia Retna, D. A. (2022). Pengetahuan Ibu Hamil Trimester Iii (Primigravida) Tentang Persiapan Persalinan Di Kecamatan Semanding Kabupaten Tuban. *Jurnal Keperawatan Widya Gantari Indonesia*, 46-56.