



Analysis of socio-demographic factors affecting the management options for emesis gravidarum in pregnant women

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ABSTRAK

Latar Belakang: Penatalaksanaan emesis pada kehamilan tergantung dari berat ringannya gejala yang dirasakan ibu hamil. Pengobatan emesis gravidarum dapat dilakukan dengan beberapa cara: pengobatan farmakologis yaitu penggunaan obat-obatan medis, pengobatan nonfarmakologis seperti menghindari konsumsi santan atau makanan yang mengandung lemak, dan sering makan makanan dalam porsi kecil. Selain itu, penatalaksanaan emesis gravidarum juga dapat dilakukan dengan pengobatan komplementer dengan akupresur, aromaterapi, dan metode lainnya. Saat ini jenis penatalaksanaan yang paling banyak dipilih oleh tenaga kesehatan dan diterima oleh ibu hamil adalah pengobatan farmakologis dan nonfarmakologis. Saat ini tenaga kesehatan sudah mulai mengembangkan dan menerapkan penggunaan terapi komplementer dalam mengatasi emesis gravidarum pada ibu hamil.

Tujuan: Penelitian ini bertujuan untuk menganalisis karakteristik ibu hamil yang mempengaruhi pilihan penatalaksanaan emesis gravidarum.

Metode: Penelitian ini merupakan penelitian kuantitatif cross sectional. Penelitian dilakukan di Praktek Bidan Mandiri (PBM) Nanik, Sidoarjo. Populasi dalam penelitian ini adalah ibu hamil trimester I. 43 responden diambil sebagai sampel dengan menggunakan purposive sampling. Variabel bebas dalam penelitian ini adalah faktor-faktor yang mempengaruhi ibu seperti umur, pekerjaan, pendidikan, paritas, dan pengetahuan. Sedangkan variabel terikatnya adalah terapi emesis gravidarum yang dipilih (terapi farmakologi, nonfarmakologi dan komplementer). Pengumpulan data dilakukan secara langsung dengan menggunakan kuesioner.

Hasil: Hasil penelitian menunjukkan bahwa sebagian besar responden (67%) adalah mereka yang berusia 21-35 tahun, 58% adalah ibu primipara, 58% memiliki pendidikan menengah, 51% adalah ibu rumah tangga, sedangkan 47% memiliki tingkat pengetahuan yang baik tentang manajemen emesis gravidarum. Analisis bivariat menggunakan chi square menunjukkan bahwa pendidikan, pekerjaan dan pengetahuan berpengaruh terhadap pilihan terapi emesis gravidarum dengan p value < 0,05.

Kesimpulan: Pendidikan, pekerjaan, dan pengetahuan merupakan faktor yang berhubungan dengan pilihan penatalaksanaan mual muntah pada ibu hamil. Oleh karena itu, kerjasama dan pengambilan keputusan yang tepat sangat diperlukan dalam menentukan terapi emesis gravidarum.

KATA KUNCI : terapi; muntah; gravidarum

ABSTRACT

Background: Management of emesis in pregnancy depends on the severity of the symptoms felt by the pregnant woman. Treatment for emesis gravidarum can be carried out in several ways: pharmacological treatment which is the use of medical drugs, non-pharmacological treatment such as avoiding the consumption of coconut

milk or fat-containing food, and frequent eating of small portion of food. In addition, the management of emesis gravidarum can also be done using a complementary treatment with acupressure, aromatherapy, and other methods. Currently, the type of management chosen by most health workers and accepted by pregnant women are pharmacological and non-pharmacological treatments. Recently, health workers have begun to develop and apply the use of complementary therapies in overcoming emesis gravidarum in pregnant women.

Objectives: This study aims to analyze the characteristics of pregnant women that influence the choice of emesis gravidarum management.

Methods: This was a cross sectional quantitative study. The research was conducted at the Independent Midwife Practice (PBM) Nanik, Sidoarjo. The population in this study were women in the 1st trimester of pregnancy. 43 respondents were taken as sample by using purposive sampling. The independent variables in this study were factors that influence the mother, such as age, occupation, education, parity, and knowledge. Meanwhile, the dependent variable was the emesis gravidarum therapy chosen (pharmacological, non-pharmacological and complementary therapies). The data were collected directly using questionnaires.

Results: The results show that most of the respondents (67%) were those aged 21-35 years, 58% was primiparous mothers, 58% had secondary education, 51% was housewives, while 47% had good knowledge level about emesis gravidarum management. The bivariate analysis using chi square showed that education, occupation and knowledge had an effect on the choice of therapy for emesis gravidarum with p value < 0.05 .

Conclusions: Education, occupation, and knowledge were factors related to the choice of management for nausea and vomiting in pregnant women. Therefore, cooperation and the right decision making were necessary in determining the therapy for emesis gravidarum.

KEYWORD : therapy; vomiting; gravidarum

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INTRODUCTION

Emesis gravidarum is a normal symptom frequently occurs in the first trimester of pregnancy. Nausea and vomiting occur in 60-80% of primigravida. Even one in a thousand pregnancies, these symptoms become more severe (1). Excessive emesis gravidarum and inadequate nutritional intake can also affect the nutritional status of pregnant women because their nutritional status greatly affects the growth of the fetus in the womb. The poor nutritional status, either before pregnancy or during pregnancy, may lead to the occurrence of low birth weight (LBW) (2).

In 2016, of the total number of pregnant women, there were 183,645 (10-15%) incidences

of emesis gravidarum in East Java Province (3). Emesis gravidarum occurs due to an increase in estrogen and progesterone, as well as human chorionic gonadotropin secretion in the placenta (4). Nausea and vomiting are also caused by the consumption of high protein foods with low carbohydrates and vitamins. The lack of food, lack of sleep or rest, and stress can also worsen nausea.

Management of emesis in pregnancy depends on the severity of the symptoms (5). Pharmacological, non-pharmacological and complementary therapy can be done as treatments. Pharmacological therapy is carried out by giving antiemetics, antihistamines,

anticholinergics, and corticosteroids. Non-pharmacological therapy is non-instructive, non-invasive, inexpensive, simple, effective, and without adverse side effects (6). Meanwhile, non-pharmacological management of nausea and vomiting in pregnancy is frequent eating of small portion of food (for example every two hours), avoiding strong-smelling foods, trying to snack on crackers after eating, waking up early, consuming high carbohydrate foods, drinking sweet juices in the morning, avoiding smoking and drinking, and reducing stress; while complementary treatment that can be carried out are using acupuncture, drinking peppermint tea, sucking mint candy, eating spearmint, using aromatherapy (ginger peppermint, or lemon) (7,8).

Some people think that pharmacological therapy is more effective than non-pharmacological and complementary therapies (9). It should also be noted that pharmacological therapy will cause side effects compared to the others. Ingredients of Vitamin B6 are reported to have side effects such as causing headaches, diarrhea and drowsiness. In addition, currently, complementary medicine has also begun to be developed. Health workers should pay more attention in selecting types of therapy for pregnant women by considering many things. Likewise, many non-pharmacological and complementary therapies have been developed. It was well known by the term "Back to nature" by the people today. Furthermore, public knowledge about health has also improved. Therefore, this study aims to analyze the factors that influence the choice of therapy for emesis gravidarum in pregnant women.

MATERIALS AND METHODS

This was a quantitative research conducted by employing a cross sectional study. The research was carried out at the Independent Midwife Practice (PMB) Nanik, Sidoarjo. The independent variables in this study were factors

that influence pregnant women in determining therapy for emesis gravidarum, such as age, occupation, education, parity, and knowledge. Meanwhile, the dependent variable was the choice of therapy for emesis gravidarum (pharmacological, non-pharmacological and complementary therapies). The data was collected directly using questionnaires.

The population in this study were women in their first trimesters of pregnancy. The samples were taken using purposive sampling. The inclusion criteria was primigravida in the first trimesters of pregnancy who experience emesis gravidarum without suffering from other pregnancy diseases. The independent variables in this study were then analyzed using univariate and bivariate analysis and were concluded.

Purposive sampling was applied in this research. It is a way of taking data with certain consideration (10). The sample in this study were women in the first trimesters of pregnancy who experienced emesis gravidarum. The respondents must meet the inclusion criteria set by the study, that is primigravida in the first trimesters of pregnancy who experience emesis gravidarum without other pregnancy diseases and those who are willing to be respondents without any element of coercion.

The population in this study was obtained based on the average visit of 48 pregnant women in their first trimesters to the Independent Midwife Practice (PMB) for 3 months. Based on the sample size formula proposed by Nursalam (11), 43 respondents were taken as samples. Respondents who meet the researcher's criteria will fill out a research questionnaire made by the researcher after validity and reliability testing.

RESULTS AND DISCUSSION

RESULTS

Nausea and vomiting, also known as emesis gravidarum, are experienced by most pregnant women in early pregnancy. They are

often called as morning sickness; however, in fact they can occur at any time. In some cases, they can continue until the second and third trimesters of pregnancy, but this occurrence is rare (12). Frequent and too much emesis like this will be pathological and is known as hyperemesis gravidarum (13).

Excessive nausea and vomiting experienced by pregnant women may lead to electrolyte imbalances, weight loss (more than 5% of initial body weight), dehydration, ketosis, and nutritional deficiencies. This begins to occur in the fourth to tenth week of pregnancy and then will improve at the twentieth week; in some cases, however, it may continue until the next stage of pregnancy (14). Thus, appropriate therapy for treating nausea and vomiting need to be given according to the mother's condition for her own and her fetuses improvement.

Demographic factors that can influence pregnant women in choosing therapy to treat nausea and vomiting are age, education, occupation, and knowledge. In this study, these factors were analyzed because they affect pregnant women in making the right decisions. Thus, the therapy given is expected to provide benefits and is right on target.

Table 1. Frequency distribution of age, parity, education, occupation, and knowledge

Variable	Frequency (n)	Percentage (%)
Age		
< 20 years	6	14
21-35 years	29	67
>35 years	8	19
Parity		
Primipara	25	58
Multipara	18	42
Education		
Secondary	25	58
College	18	42
Occupation		
Housewife	22	51
Private employee	16	37
Entrepreneur	5	12
Knowledge		
Well	20	47
Enough	19	44
Not enough	4	9

As can be seen in **Table 1**, most respondents (67%) or as many as 29 pregnant women are of reproductive age (21-35 years); based on the parity variable, 25 respondents (58%) are primiparous; in terms of the education level, 25 respondents (58%) have middle school/high school/equivalent educational background; in terms of occupation, 22 respondents (51%) are housewives or not working; and based on the knowledge variable, 20 respondents (47%) are considered to possess well knowledge.

Table 2. The cross table of factors that influence the choice of therapy for emesis gravidarum

	Emesis Gravidarum Therapy			P value
	Pharmacology	Nonpharmacological	Complementary	
Age				0,259
< 20 years	4	1	1	
21-35 years	10	2	17	
>35 years	3	2	3	
Parity				0,474
Primipara	8	3	14	
Multipara	9	2	7	
Education				0,006
Secondary	5	3	17	
College	12	2	4	
Work				0,021
Housewife	14	2	6	
Private employee	2	2	12	
Entrepreneur	1	1	3	
Knowledge				0,019
Well	3	3	14	
Enough	11	1	0	
Not enough	3	1	7	

Table 2 shows that in terms of age, most respondents (17 pregnant women) in the reproductive age group prefer complementary treatment for emesis gravidarum. Likewise, In the parity variable, most primiparous respondents (14 pregnant women) prefer complementary therapy. Education factor also shows the same result; some respondents (17 pregnant women) with secondary education prefer the same type of therapy. In contrast to the work factor, most respondents (14 pregnant women) who work as housewives prefer pharmacological therapy than the others. Meanwhile, 14 respondents under the knowledge variable who possess good knowledge choose complementary therapies. The results of the chi-square analysis shows that education, occupation, and knowledge are related to the selection of emesis gravidarum therapy with p value > 0.05 .

DISCUSSION

Management of emesis gravidarum can be carried out in the form of pharmacological and non-pharmacological therapy. Overcoming emesis gravidarum can be done through pharmacological treatments, one of which is by giving pyridoxine (Vitamin B6) intervention. The need for pyridoxine in pregnant women increases to 2.2 mg daily. The dose used for morning sickness is 25mg (15). Besides, antihistamines, phenothiazines and metoclopramide, and corticosteroids can be given for treatment. Meanwhile, the complementary therapies that can be done to overcome emesis gravidarum include giving acupuncture to relieve nausea and drinking peppermint tea. If these treatments do not work, sucking mint candy or spearmint can be tried. In addition, pregnant women may also use ginger, spearmint, peppermint, or lemon aromatherapy (16). Then, another complementary therapy for emesis gravidarum is drinking ginger tea (boil ginger in water, strain and mix with honey). According to Rahmaini (17),

ginger decoction is proven to reduce nausea and vomiting in pregnancy by giving it for 3 days. Ginger contains essential oil, zingiberol, curcumin, gingerol and vitamin A. Gingerol in ginger has function to facilitate blood circulation so that it can improve the performance of the nervous system, while essential oils and others block serotonin which is a neurotransmitter in the central nervous system and enterochromaffin cell on the digestive system to suppress nausea and vomiting as well as to provide a sense of comfort in the stomach (18). Astriana (19) argues that there is a change in the average frequency of nausea before and after given lemon aromatherapy inhalation, from 4.53 to 3.13 in a day. In addition, other complementary therapies that can also be used for the management of nausea and vomiting is acupressure and this has been proven by several studies (20–22).

The results of this study indicate that there is no relationship between maternal age and parity with the choice of therapy for emesis gravidarum. This is indicated by p value of 0.259 and 0.474 > 0.05 . This study is in accordance with that conducted regarding the relationship between several risk factors for pregnant women with hyperemesis gravidarum; there is no relationship between maternal age and hyperemesis gravidarum. Mothers who have experienced a second pregnancy are better at handling nausea and vomiting independently (23).

Analysis with statistical tests in this study shows that education is related to the choice of therapy for emesis gravidarum with p value $0.006 < 0.05$. A person's education will affect her attitudes in determining the actions she needs to take, including how she carry out pregnancy care and how she overcome nausea and vomiting. The levels of education greatly affect how a person acts and looks for causes and solutions in her life; highly educated people will usually act more rationally (Walyani, 2014). Therefore, educated people will be more receptive to new

ideas. Likewise, pregnant women who are highly educated will have their pregnancy checked regularly in order to maintain the health condition of themselves and the children in their womb.

Healthy behavior, pregnancy check-ups for instance, requires knowledge about the its benefits, both for the health of the mother herself and for the fetus (24). The process of attitudes and behavior change of a person or a group and is regarded as an attempt towards maturation through directive and training efforts. The higher a person's education, the faster information that he/she will receive and understand, hence their knowledge is also higher (25). In addition, health education about the management of nausea and vomiting given to pregnant women will also affect the mother activities in dealing with nausea and vomiting (26).

Furthermore, work also affects a pregnant woman in overcoming emesis gravidarum. The statistical test shows p value of $0.021 < 0.05$, indicating that there is a relationship between type of work and the choice of therapy for emesis gravidarum. Most respondents who are housewives prefer pharmacological therapy, because most mothers think that this therapy has a faster effect in overcoming nausea and vomiting. Another study also shows that mothers' caring ability will also be affected due to nausea and vomiting (27).

Meanwhile, working mothers, both who work as private employee and self-employed, prefer complementary therapies. Working mothers will get more information and they will also find it easier to find access to more health services. It is also influenced by the type of work and where they work. Pharmacological treatment has side effects on both the mother and the fetus so that non-pharmacological and complementary treatment are forms of alternative therapy in overcoming the onset of vomiting (28).

The results of the statistical test also show that the knowledge factor of pregnant women

also influence the choice of therapy for emesis gravidarum with p value of $0.019 < 0.05$. Mothers who have good knowledge mostly choose complementary therapy because it has less risk to themselves and their fetus. The mothers knowledge is influenced by their level of education (29). This is in accordance to the data found in this study because the respondents in this study have at least secondary education. Thus, the ability to think and process information is also better.

The results of this study are in line with that conducted by Siregar (30), stating that pregnant women tend to be positive in dealing with nausea and vomiting. In addition, it is also necessary to provide motivation for pregnant women to be positive in dealing with nausea and vomiting that occur.

The development of health science is currently starting to be directed at physiological treatment according to the patient needs. Complementary and non-pharmacological therapies have begun to be developed to reduce the routine use of drugs. In order to handle nausea and vomiting, complementary therapies with herbs have begun to be developed (31,32). In addition, the development of complementary therapies in Indonesia has been regulated in the Regulation of the Minister of Health of the Republic of Indonesia Number 15 of 2018 concerning the Implementation of Complementary Traditional Health Services (33).

CONCLUSION AND RECOMMENDATION

This study concludes that there is a significant relationship between education, work and knowledge factors with the selection of therapeutic methods for emesis gravidarum.

Health workers and the community, especially pregnant women, can work well together to increase their knowledge about various therapies that can be done to reduce nausea and vomiting. Thus, pregnant women do not always need to depend on the use of

pharmacological therapy as the only therapy to treat emesis gravidarum. They can do it independently at home with non-pharmacological and complementary therapies.

REFERENCES

1. Prawirohardjo S. Ilmu kebidanan Sarwono Prawirohardjo. Jakarta: PT. Bina Pustaka Sarwono Prawirohardjo; 2014.
2. Supriasa ID, Bakri B, Fajar I. Penilaian status gizi. Jakarta: EGC; 2013.
3. Dinas Kesehatan. Profil kesehatan Provinsi Jawa Timur tahun 2016. Surabaya; 2016.
4. Manuaba IBG. Ilmu kebidanan, penyakit kandungan, dan keluarga berencana. 2nd ed. Jakarta: EGC; 2014.
5. Boelig RC, Barton SJ, Saccone G, Kelly AJ, Edwards SJ, Berghella V. Interventions for treating hyperemesis gravidarum. *Cochrane Database Systematic Reviews Journal Maternal Fetal Neonatal Medicine*. 2018 Sep;31(18):2492-2505..
6. Sumah DF, Madiuw D, Tasijawa FA, Leutualy V. Non-pharmacologic intervention for nausea and vomiting of pregnancy: Systematic Review. *Jurnal Aisyah Jurnal Ilmu Kesehatan*. 2021Des;6(4):663–72.
7. Cholifah S, Nuriyanah TE. Aromaterapi lemon menurunkan mual muntah pada ibu hamil trimester I. *Jurnal Kebidanan Midwiferia*. 2019;4(1):36.
8. Vitrianingsih, Khadijah S. Efektifitas aroma terapi lemon untuk menangani emesis gravidarum. *Jurnal Keperawatan*. 2019;11(4):277–84.
9. Widiyari NPA, Trapika IG. Pola pemberian terapi mual dan muntah pada ibu hamil oleh dokter spesialis obstetri dan ginekologi sertabidan di kota Denpasar. *E-Jurnal Medika Udayana*. 2017 Mei;6(5):28–35.
10. Sugiyono. Metode penelitian kombinasi (mixed methods). Bandung: CV Alfabeta; 2018.
11. Nursalam. Metodologi penelitian ilmu keperawatan pendekatan praktis. 4th ed. Jakarta: Salemba Medika; 2016.
12. Aritonang E. Gizi dalam daur kehidupan. Bogor: IPB Press; 2010.
13. Marmi. Asuhan kebidanan pada ibu hamil. Yogyakarta: Pustaka Pelajar; 2014.
14. Aifuddin AB. Buku panduan praktis pelayanan kesehatan maternal. Jakarta: YBPSP; 2014.
15. Oxorn H, Forte WR. Ilmu kebidanan patologi dan fisiologi persalinan. Yogyakarta: Yayasan Essential Medica (YEM) Yogyakarta; 2010.
16. Somoyani NK. Literature review: terapi uoplementer untuk mengurangi mual muntah pada masa kehamilan. *Jurnal Ilmu Kebidanan (Journal of Midwifery)*. 2018;8(1):10–7.
17. Harahap RF, Alamanda LD, Harefa IL. The effect of ginger stewing water on decreasing nausea and vomiting in first trimester pregnant women. *Jurnal Ilmu Keperawatan*. 2020;8(1):84–96.
18. Hernani, Winarti, Christina. Kandungan bahan aktif jahe dan pemanfaatannya dalam bidang kesehatan. Bogor: Balai Besar Penelitian dan Pengembangan Pascapanen Pertanian; 2013.
19. Astriana, Putri RD, Aprilia H. Pengaruh lemon inhalasi aromatherapy terhadap mual pada kehamilan di BPS Varia Mega Lestari S.ST, M.Kes Batupuru Kecamatan Natar, Kabupaten Lampung Selatan, tahun 2015. *Jurnal Kebidanan*. 2015;1(3).
20. Widyastuti DE, Rumiati E, Widyastutik D. Acupressure complementary therapy to treat emesis gravidarum in first trimester pregnant women year 2018. *Jurnal Kebidanan Indonesia*. 2019;10(1):96–104.
21. Juwita L. Literature Review: Complementary therapy of acupressure on point of pericardium 6 for overcoming nausea and vomiting in early pregnancy. *Journal Ners Lentera*. 2015 Sep;3(1):40–50.

22. Dewi R, Noviyanti. Pengaruh terapi komplementer akupresur terhadap emesis gravidarum pada ibu hamil trimester I. *Holistik. Jurnal Kesehatan*. 2021 Mar;15(1):89–94.
23. Astuti E. Gambaran penanganan mandiri ibu hamil dengan emesis gravidarum pada trimester 1 di BKIA Rumah Sakit William Booth Surabaya. *Jurnal Ilmu Kebidanan*. 2015;4(1):7-4
24. Umbah HS, Mamuaya T, Lumy FSN. Faktor-faktor yang berhubungan dengan kejadian hiperemesis gravidarum di Puskesmas Tompasso, Kabupaten Minahasa. *Jurnal Ilmu Bidan (JIDAN)*. 2014;2(2).
25. Sriningsih I. Faktor demografi, pengetahuan ibu tentang air susu ibu dan pemberian ASI eksklusif. *Jurnal Kesehatatan Masyarakat*. 2011;6(2):100–6.
26. Pebrianthy L, Dewi SS. Pendidikan kesehatan tentang terapi komplementer untuk mengatasi mual muntah pada ibu hamil di Desa Labuhan Labo tahun 2019. *Jurnal Pengabdian Masyarakat Aufa (JPMA)*. 2020;2(1):23–6.
27. Mattison DR. *Clinical pharmacology during pregnancy*. 1st ed. London: Academic Press; 2013.
28. Kia PY. The effect of lemon inhalation on nausea and vomiting of pregnancy: A double-blinded, randomized, controlled clinical trial. *Iran Red Crescent Medical Journal*. 2014; 10
29. Riyanto BA. *Kapita selekta kuisisioner: pengetahuan dan sikap*. Jakarta: Salemba Medika; 2013.
30. Siregar NS. Perilaku ibu hamil dalam mengatasi mual muntah di wilayah puskesmas Kecamatan Sungai Kanan. *Fakultas Keperawatan Universitas Sumatera Utara*; 2020.
31. Dante G, Bellei G, Neri I, Facchinetti. Herbal therapies in pregnancy: what works? *Current Opinion in Obstetrics and Gynecology*. 2014;26(2):83–91.
32. Moraes Fróes NB, de Souza Arrais FA, de Souza Aquino P, Maia JC, Dutra Balsells MM. Effects of auriculotherapy in the treatment of nausea and vomiting: a systematic review. *Revista Brasileira Enfermagem*. 2021;24(75 (1)):e20201350.
33. Peraturan Menteri Kesehatan Republik Indonesia nomor 15 Tahun 2018 Tentang Penyelenggaraan Pelayanan Kesehatan Tradisional Komplementer. Menteri Kesehatan Republik Indonesia. 2018.