

Literature Review: Factor that Influence The Management of Hyperemesis Gravidarum in First Trimester Pregnancy

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Article Info	Abstract
Article History Submitted, 2025-11-02 Accepted, 2025-11-30 Published, 2025-12-31 Keywords: Hyperemesis gravidarum, pregnancy	Hyperemesis gravidarum is a condition of excessive nausea and vomiting during pregnancy that can cause dehydration, electrolyte disturbances, and reduce the quality of life of pregnant women. Hyperemesis gravidarum is experienced by 50-70% of pregnant women with a gestational age of 5-12 weeks. HEG can pose health risks and even death for the mother and baby, so it is necessary to improve the quality of health in pregnant women. The impact of hyperemesis gravidarum not only threatens the life of the woman, but can also cause side effects on the fetus such as abortion, low birth weight, premature birth, and malformations in newborns. Factors that influence the management of hyperemesis gravidarum include maternal risk factors such as age, parity, and personal history and multifactorial causes such as hormones, genetics, psychological, and other medical conditions. Treatment includes pharmacological and non-pharmacological management. The purpose of this journal is to determine the factors that influence the management of hyperemesis gravidarum in the first trimester by reviewing several literatures. This research method is a descriptive analys, this study is in the form of a literature review conducted in October. The literature sources were obtained from Google Scholar, Science Direct, ProQuest, and PubMed publication databases, covering the last five years. The keywords were hyperemesis gravidarum and factors influencing HEG. They were then selected in stages according to predetermined criteria. 10 articles published between 2020 and 2025 were obtained. The obtained articles were compiled, analyzed, and summarized by identifying similarities and differences, providing insights, comparing, and summarizing. For further research, it is recommended to examine factors that are not related to the management of hyperemesis gravidarum in other places that may occur in order to add to the latest research literature, as a reference for handling health problems, especially discomfort in pregnancy that appears marked by excessive nausea and vomiting

Introduction

Pregnancy is a highly anticipated event in a married couple's home. During pregnancy, problems often arise, including discomfort. One of the signs of discomfort in the first trimester is nausea and vomiting. Excessive nausea and vomiting can cause health problems for pregnant women. This excessive nausea and vomiting is called hyperemesis gravidarum, hyperemesis gravidarum which appears is characterized by nausea and vomiting more than 10 times which

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results in the mother's condition being weak and causing an emergency, so that pregnant women require immediate treatment at a referral health facility.

Data from the Ministry of the Republic Indonesia according to the Ministry's performance report for 2024. One of the focuses health development in 2020–2024 is improving the health status community with indicators of public health status including the Maternal Mortality Rate (MMR). Indonesia's maternal mortality rate (MMR) is 189 per 100,000 live births (Long Form of the 2020 Population Census). While the MMR has been declining over the past four years, it remains one of the highest among ASEAN countries. Even though it has approached the 2024 RPJMN target of 183 per 100,000 live births. This figure is still very far from the SDGs target, namely reducing MMR to less than 70 per 100,000 live births by 2030. Central Java provincial health document 2024 Maternal mortality rate was 74.73 percent according to causes of death ranging from pregnancy, childbirth, to postpartum. Hyperemesis gravidarum affects 50-70% of pregnant women between weeks 5 and 12. Hyperemesis gravidarum can pose health risks and even death to both mother and baby, so improving maternal healthcare is essential to minimize potential complications.

Methods

This research, a descriptive analysis and literature review, was conducted in October. The literature sources were obtained from Google Scholar, Science Direct, ProQuest, and PubMed publication databases, covering the last five years. The keywords were hyperemesis gravidarum and factors influencing HEG. They were then selected in stages according to predetermined criteria. 10 articles published between 2020 and 2025 were obtained. The obtained articles were compiled, analyzed, and summarized by identifying similarities and differences, providing insights, comparing, and summarizing. The articles used focused on original empirical research, or research articles containing the results of actual observations or experiments, including an abstract, introduction, methods, results, and discussion.

Results and Discussion

The results of the data analysis will then be determined using a PICO (population, intervention, comparison, outcome) model, allowing us to determine whether the collected data demonstrates a significant relationship to the research topic.

To facilitate the presentation of the literature study results, a synthesis was performed using the matrix shown in Table 1.

Table 1. Article Research

No	Reseachers	Research methods	Results
1.	The Role of Citrus Lemon Aromatherapy in Alleviating Pregnancy-Induced Nausea and Vmiting: A Food Science Perspective (Nahdiana et al., 2023).	Cross-sectional	The result emphasize the usefulness of utilizing citrus lemon aromatherapy as a non-pharmalogical intervention for pregnancy-induced nausea and voiting
2.	The Factors Influencing Occurrence of Hyperemesis Gravidarum in Pregnant Women in the First Trimester at Medan Haji Hospital (I. D. Sari et al., 2024).	The Factors Influencing Occurrence of Hyperemesis Gravidarum in Pregnant Women in the First Trimester at Medan Haji Hospital	Regression test results were known that anemia and the most influential work on hyperemesis gravidarum. Anemia, parity, education, and occupation influence the occurrence of Hyperemesis Gravidarum at Haji General Hospital Medan.
3.	The Relationship Between Hyperemesis Gravidarum and Nutritional Status of Pregnant Women in the First Trimester at the Teuku Peukan Regional General Hospital, Southwest Aceh (Anasril et al., 2025).	Cross-sectional	This means that there is a significant relationship between hyperemesis gravidarum and the nutritional status of pregnant women.
4.	The Relationship Between Pregnant Women's Knowledge and the Incidence of Hyperemesis Gravidarum in the Practice of Midwife Fina Sembiring Sari Rejo, Medan Polonia District, Medan City, 2022 (S. Sari et al., 2022).	An analytical quantitative research using a cross sectional design	There is a significant relationship between knowledge and the incidence of hyperemesis gravidarum at the Fina Sembiring Clinic with a p value <0.05 (0.002).
5.	Hyperemesis Gravidarum Levels in First Trimester Pregnant Women in Kendal Regency (Arisdiani & Hastuti, 2020)	Quantitative method with descriptive survey research design	Most respondents (92.6%) experienced moderate hyperemesis gravidarum, and a small proportion (7.4%) of respondents experienced mild hyperemesis.

6.	The Relationship Between Knowledge, Husband's Support, And Attitudes Of Pregnant Women With Hyperemesis Gravidarum At Midwife Irna Dewi Megawati's PMB In 2023 (Damayanti et al., 2023)	Quantitative research using a descriptive analytical research design	There is a Relationship between Knowledge and Hyperemesis Gravidarum with a p-value of 0.000 OR = 7.818. There is a Relationship between Husband's Support and Hyperemesis Gravidarum with a p-value of 0.000 OR = 6.855. There is a Relationship between Pregnant Women's Attitudes and Hyperemesis Gravidarum at PMB Midwife Irna Dewi Megawati Bogor in 2022 with a p-value of 0.000 OR = 3.636
7	The Relationship Between Parity and the Incidence of Hyperemesis Gravidarum in Pregnant Women (Paskana & Gusnidarsih, 2020)	Descriptive correlational research with a cross-sectional	The results of the study obtained a p value = 0.000 < 0.05, which means there is a relationship between maternal parity and the incidence of hyperemesis gravidarum at Hassanuddin Damrah Manna Hospital, South Bengkulu.
8	Factors Influencing the Incidence of Hyperemesis Gravidarum in Pregnant Women (Munir et al., 2022).	Analytical research with a cross-sectional approach	There is a relationship between maternal age, parity, pregnancy spacing, and maternal knowledge with the incidence of hyperemesis gravidarum, and there is no relationship between maternal occupation and the incidence of hyperemesis gravidarum.
9	Application of Acupressure Therapy to Reduce Nausea and Vomiting in Pregnant Women with Hyperemesis Gravidarum (Trifa & Sulastri, 2025)	Case study design with the application of Evidence- Based Nursing	The results of the study showed a decrease in nausea and vomiting scores in both subjects
10	Factors Affecting Hyperemesis Gravidarum in Pregnant Women in the First Trimester at TPMB N, Tangerang Regency (Muninggar & Sugiarti, 2025).	Cross-sectional	There is a relationship between parity, age, occupation, nutritional status, and psychological status with hyperemesis gravidarum.

The impact of hyperemesis gravidarum not only threatens the woman's life, but can also cause side effects on the fetus such as abortion, low birth weight, premature birth, and malformations in newborns. From 10 literatures reviewed by the author, it states that there is a relationship between factors that influence the management of hyperemesis gravidarum, including maternal risk factors such as age, parity, medical history, genetics, psychological factors such as husband's support, mother's occupation, pharmacological factors such as vitamin B6 administration, use of antiemetic drugs, and non-pharmacological factors such as aromatherapy and acupressure massage.

Conclusion and Recommendations

Compliance Based on the 10 articles that have been reviewed, there are 11 journals that have similarities which state that there are factors related to the management of hyperemesis gravidarum. For further research, it is recommended to examine factors that are not related to the management of hyperemesis gravidarum in other places that may occur in order to add to the latest research literature, as a reference for handling health problems, especially discomfort in pregnancy that appears marked by excessive nausea and vomiting.

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