

Socio Demographic Characteristics Of Pregnant Women Who Are Experiencing Nausea Vomiting In Rural Areas Of Banyumas Regency

Lutfatul Latifah^{1*}, *Nina Setiawati*¹, *Aprilia Kartikasari*¹, *Eli Kusmiati*¹

¹Department of Nursing, Faculty of Health Sciences, Universitas Jenderal Soedirman

Abstract. Nausea vomiting in pregnancy or commonly referred to as morning sickness is a common complaint in the first trimester, although it can also occur in the second trimester or all trimester. The purpose of this study was to determine the characteristic of pregnant women who experience morning sickness in rural areas. Respondents in this study were pregnant women who experienced morning sickness during July-September 2018 in rural areas of Banyumas District, Central Java Province, Indonesia. This study have used quantitative descriptive design. The results of univariate analysis of 61 pregnant women involved, 77% age of mothers were at low risk, 39,3% were junior high school education, 82% were not working, 60% were pregnant in the first trimester, 61,7% were multigravida, 55.7% did not have a history of nausea and vomiting, and 73,8% in the category of mild nausea and vomiting. It can be concluded that pregnant women who experience nausea and vomiting in rural areas are the majority of those who are of low risk, do not work, are pregnant for the first time, have early pregnancy, and with mild nausea and vomiting.

1 Introduction

The Pregnancy begins with the conception or meeting of eggs and sperm. During pregnancy physical and psychological changes occur in pregnant women as a form of pregnancy adaptation. Changes that occur during pregnancy cause various discomforts felt by pregnant women, one of which is nausea and or vomiting, known as morning

*Corresponding author: latifah.lutfatul@gmail.com/lutfatul.latifah@unsoed.ac.id

sickness. Although referred to as morning sickness, symptoms of nausea and vomiting can occur throughout the day and often are early symptoms of pregnancy (1). The time and duration of nausea and vomiting are different in some pregnant women, some experience non-stop nausea with or without vomiting and some experience day or night and often last throughout the day. Morning sickness can begin to be felt at the beginning of the second week of pregnancy or at 8 or 12 weeks' gestation and disappear when gestational age reaches the twentieth week, but 20-30% of pregnant women continue to experience symptoms for more than 20 weeks of gestation until delivery (2,3).

The cause of morning sickness is still unclear but its high frequency shows that nausea and vomiting are normal events in early pregnancy (4). Possible causes are a result of increased levels of human chorionic gonadotropin (hCG) and estrogen and with thyroxine, prostaglandin E₂, and prolactin as additional supporting factors (2). Apart from that emotional condition where mothers in the first trimester experience mood swings, ambivalence or rejection of pregnancy also contributes (5,6).

In several studies, the incidence of nausea and vomiting in pregnant women was associated with increased pregnancy hormones, older maternal age, type of work, level of education, smoking behavior, infant sex, and stress levels (2). In addition, reproductive history such as increased gravidity, parity, and a history of abortion are also said to increase the risk of nausea and vomiting. Chan et al. (2) also conveyed the duration of symptoms of long-term nausea and vomiting, which is longer than 4 months and is usually more common in younger women, women with multiple pregnancies, and in multigravidas. The results of several studies have considered demographic characteristics, maternal and psychosocial factors that can cause nausea and vomiting in general. Therefore, the aim of our study was to determine the prevalence and characteristic features of pregnant women who experience nausea and vomiting specifically in rural area populations.

2 Research methods

This study has received ethic approval from the Ethics Commission of the Faculty of Medicine Unsoed. This study uses descriptive analysis method with a quantitative approach. Data for this study were collected from July to October 2018 in rural populations in 3 sub-districts with 6 working areas of health centers in Banyumas Regency. During this period there were 61 pregnant women with nausea and vomiting who examined the condition of their pregnancy to Baturraden I and II Health Centers, Sumbang I and II Health Centers, and Kembaran I and II Health Centers stated they were willing to become respondents.

Demographic variables (such as maternal age, gestational age, gravida, parity, history of nausea vomiting, abortion history, education, employment and economic status) were reported to be associated with the incidence of nausea and vomiting in pregnant women (2,7,8) taken using a questionnaire filled out by the respondents themselves. While the variable severity of vomiting nausea was measured using Unique Quantification of Emesis and Nausea (PUQE) -24 scoring system developed by Ebrahimi, Maltepe, Bournissen, & Koren (9) and has been translated into Indonesian and used in previous research (10). Descriptive statistics were used to analyze the description of each socio-demographic variable and the severity of nausea and vomiting.

3 Result

The results of descriptive statistical analysis of several demographic variables and severity of nausea and vomiting can be seen in Table 2. below.

Table 1. Table of Frequency Distribution of Characteristics of Pregnant Women With Vomiting Nausea in Rural Areas in July-October 2018 (n = 61)

Variable	f	Percentage (%)
Age of mothers		
a. High risk (<20 years and > 35 years)	14	33
b. Low risk (20-35 years) mothers	47	77
Level of education in		
a. elementary	18	29,5
b. junior high school	24	39,3
c. senior high school	16	26,2
d. higher education	3	4,9
Job Status		
a. Not working	50	82
b. Working	11	18
Income		
a. Low income		55,7
b. High income		44,3
Age pregnancy		
a. First trimester	36	60.0
c. b. Second trimester	21	35.0
d. Thirdtrimester	3	5.0
Gravida		
a. Primigravida	23	38.3
b. Multigravida	38	61.7
History of nausea and vomiting		
a. Never	34	55,7
b. Ever	27	44,3
Level of Nausea Vomiting		
a. Mild	45	7,8
b. Moderate	16	26,2
c. Weight	0	0,0

Based on Table 1. it can be seen that the majority of pregnant women who experience nausea vomiting in rural areas are those aged between 20-35 years or in the category low risk as many as 47 respondents (77 %) with 39.3% of respondents educated last junior high school or as many as 24 respondents. The majority of mothers who experience nausea and vomiting also have a non-working status that is as many as 50 respondents (82%) and followed by more than 50% of respondents have low income (34 respondents). Mothers who experience nausea vomiting on average with gestational age in the first trimester (60%) and second trimester (35%) and the majority are multigravida (61.7%). More than half of respondents (55.7 %)

have no history of previous nausea and vomiting and 73.8% or as many as 45 respondents experienced mild nausea and vomiting.

4 Discussion

Age is one of the risk factors for NVP, where NVP occurs more at a younger age (11), while increasing age is associated with a decrease in nausea and vomiting in pregnancy (12). The age of respondents in this study was mostly at low risk gestational age. The results of this study are not different from previous studies where the average age of pregnant women who experience NVP is in the age range of 20-35 years. Kugahara and Ohashi (13) reported that the average age of pregnant women experiencing nausea and vomiting was 25.2 years while the average age of pregnant women suffering from NVP reported by Matok et al. (14) is 29.7 years. In the results of the Suwarni study (15), 80% of mothers were aged 21-35 years.

In this study, most pregnant women who experience nausea and vomiting were at 9-12 weeks' gestation. Lacroix's (16) study found that the majority of pregnant women, about 90%, experience nausea vomiting at 8 weeks' gestation and peak at 11-13 weeks. At 14 weeks' gestation, 50% of pregnant women have started to reduce vomiting, but 90% continue to experience nausea and vomiting until the age of 22 weeks. Some studies have found a link between the production of hCG (human chorionic gonadotropin) and the incidence of nausea and vomiting.

The Kugahara & Ohashi study (13) divides the gestational age of mothers who experience morning sickness to 4-7 weeks, 8-11 weeks, 12-15 weeks and 16-19 weeks. He said that at the age of 16-19 weeks the mother had reduced her vomiting. In this study there were also third trimester pregnant women who still experience nausea vomiting, which is as much as 5%. The incidence of nausea and vomiting reported in the third trimester is significantly lower than in the first or second trimester of pregnancy and along with increasing gestational age the symptoms of severity of nausea and vomiting diminish. This is in accordance with that expressed by Gadsby et al. (12) where the symptoms of nausea and vomiting decrease after 20 weeks' gestation. However, on the contrary, Chou et al. (12) who have conducted a prospective longitudinal study of 91 pregnant women measured using Index of Nausea, Vomiting, and Retching (INVR) reported that NVP in the second and third trimesters was significantly lower than the first trimester, so the average value of INVR in the second trimester is not much different from the third trimester.

The highest education level of respondents is junior high school. According to data from Central The Bureau of Statistics province of Central Java (12), the average length of education of the population of Central Java is 7.27 and the population of Banyumas Regency is 7.4. The results of this study indicate that respondents had higher education than the average population of Central Java and especially Banyumas Regency, but were lower than the average length of education of the Indonesian population at 8.32 years (17). The results of this study are in line with the research (10) where 40% of respondents were educated in junior high school. It is different from the research of Suwarni (15) and Heitmann, Nordeng, Havnen, Solheimsnes, & Holst (18) where the highest education level of respondents is in the category of higher education. This difference is possible because of the research area of Suwarni (15) and Heitmann et al. (18) located in urban areas while this research is located in rural areas.

NVP is associated with low income levels and mothers do not work (16). In line

with this study, it was found that the majority of respondents did not work and more than half had income below the regional minimum wage (UMR). UMR of Banyumas Regency amounted to Rp 1,589,000, and the family income of respondents was a majority below that figure. The researcher analyzes that more than 50% of the respondents are below the poverty line and are between 17.52% of the poor population of Banyumas Regency and 14.88% of the population in Central Java with an income level of Rp 322,489 per month (17,19). However, the results of this study are different from findings from the Heitmann et al. (18) who reported that 80% of mothers who experienced NVP were working mothers and only 7.4% did not work. Piwko's, Koren, Babashov, Vicente, & Einarson (20) reported that NVP caused an increase in economic burden. The results of this study found that mothers with majority NVP did not work and family income was below the UMR. This can make the picture that mothers who experience nausea vomiting in rural areas will have an increasingly heavier economic burden.

Pregnant women who have a history of nausea and vomiting in previous pregnancies will be at risk of developing nausea and vomiting in subsequent pregnancies compared to those who do not have a history of nausea and vomiting. This statement is in line with Trogstad, Stoltenberg, Magnus, Skjærven, & Irgens's research (21) which states that 15.2% of mothers with a history of nausea and vomiting in previous pregnancies are at risk of experiencing nausea and vomiting in subsequent pregnancies. However, this statement is not in line with what was found in this study, where among 61 mothers who experienced nausea and vomiting, more than 50% of mothers had never experienced nausea and vomiting before. Meanwhile Fejzo, Macgibbon, Romero, Goodwin, & Mullin (22) found 57 multigravida mothers, 81% of whom reported that they experienced severe nausea and vomiting in their second pregnancy. Likewise with the results of this study where of 61 mothers who experienced nausea vomiting, 61.7% of them were multigravida mothers. But the results of a recent study conducted by Nurmi, Rautava, Gissler, Vahlberg, and Polo-Kantola (23), concluded that in the majority of pregnant women with a history of nausea and vomiting, there is no recurrence in subsequent pregnancies. Even so the risk of recurrence cannot be predicted for each individual (pregnant woman).

The severity of NVP in pregnant women varies. The results of this study the majority of respondents experienced mild NVP and none experienced severe NVP. In contrast to the research of Heitmann et al. (18) who reported that of a total of 712 respondents, the majority of 61.66% of respondents experienced moderate NVP, as many as 29.5% of respondents experienced severe NVP and only 0.09% of respondents experienced mild NVP. In line with Heitmann's study, the average NVP in the Matok et al. (14) of 9 which means that the average respondent experiences moderate nausea and vomiting. The study both used the PUQE-24 score in categorizing NVP.

5 Conclusion

The conclusion that can be drawn from this study is that mothers who experience nausea vomiting in rural areas are mostly low educated followed by low economic status. This makes the burden of life more severe so that appropriate treatment is needed to overcome nausea and vomiting in pregnant women in rural areas.

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