

EFFECTIVENESS OF EMESIS SELF-ASSESSMENT EDUCATION E-BOOK ON HANDLING EMESIS GRAVIDARUM IN PREGNANT WOMEN

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ABSTRAK

Pregnancy is a condition that causes physical and psychosocial changes in a woman due to the growth and development of her reproductive organs and fetus. Many factors influence pregnancy from the inside as well as from the outside that can cause problems, especially for the first time pregnant. According to Anwar, doctors at Bunda Jakarta Hospital around 50-70% of pregnant women experience and it is said that it is normal to experience it at 8-12 weeks of pregnancy and gradually decrease until it finally stops at 16 weeks of pregnancy. However, not a few pregnant women who still experience nausea-vomiting until the third trimester of complaints of nausea-vomiting are said to be severe if they always vomit every time they drink or eat. Emesis gravidarum will turn into hyperemesis gravidarum if it is not handled properly and causes disruption of daily activities and can even endanger the lives of pregnant women. In an all-digital era like today, we can take advantage of digital / electronic media (E-book) to provide information by reading books more efficiently anytime and anywhere, E-books can also be useful as a more efficient and effective information media. From the results of the study, there was a difference in the average emesis gravidarum score in the case group with a score of 5.33 with a standard deviation of 1.67, and the control group with a score of 7.70 with a standard deviation of 1.34. Emesis Self-Assessment educational e-book can effectively reduce emesis score by 2.32 after being controlled with educational variables and gestational age.

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INTRODUCTION

Pregnancy is a condition that causes physical and psychosocial changes in a woman due to the growth and development of her reproductive organs and fetus. Many factors influence pregnancy from the inside as well as from the outside that can cause problems, especially for the first time pregnant (Ilyas, 2014). System changes in the mother's body occur in the process of pregnancy, all of which require adaptation, both physical and psychological. In the process of adaptation, it is not uncommon for mothers to experience discomfort which although it is physiological but still needs to be given a prevention and treatment (Hatini, 2019). The first trimester is often considered as an adjustment period, from these adjustments the mother will experience discomfort that usually occurs, namely feeling headaches and dizziness, feeling tired quickly, frequent urination, vaginal discharge, bloating, shortness of breath, abdominal cramps, and including emesis gravidarum (Siwi, 2021).

One of these changes occurs in the gastrointestinal tract, where there is a decrease in the tone and motility of the gastrointestinal tract which gives rise to a lengthening of the time of gastric emptying and intestinal transit. The influence of the hormone oestrogen, the production of stomach acid increases which can cause excessive salivation (hyper saliva), the stomach area feels hot, vomiting nausea and headaches occur especially in the morning called morning sickness, vomiting that occurs is called emesis gravidarum (Pebrianty & Dewi, 2020). Emesis gravidarum can be experienced by the majority of pregnant women. According to Anwar, doctors at Bunda Jakarta Hospital around 50-70% of pregnant women experience it and it is said that it is normal to experience it at 8-12 weeks of pregnancy and gradually decrease until it finally stops at 16 weeks of pregnancy. However, not a few pregnant women who still experience nausea-vomiting until the third trimester of complaints of nausea-vomiting are said to be severe if they always vomit every time they drink or eat (Pebrianty & Dewi, 2020). According to (Pebrianty & Dewi, 2020) that mild nausea and vomiting occur between week 5 and week 12 experienced by 50% to 80% of pregnant women, hyperemesis gravidarum occurs only in an average of 1% to 2% of pregnancies. The first symptoms in pregnant women who experience mild vomiting nausea will usually occur during the first trimester.

Emesis gravidarum will turn into hyperemesis gravidarum if it is not handled properly and causes disruption of daily activities and can even endanger the lives of pregnant women (Jones, Creedy, & Gamble, 2012). Hyperemesis gravidarum is a very frequent vomiting nausea during the first half of pregnancy. Usually, nausea and vomiting begin between the first and second late menstruation and continue until about 14 weeks. Nausea and vomiting are usually more severe in the morning, but may continue throughout the day (Ilyas, 2014).

In an all-digital era like today, we can take advantage of digital / electronic media (E-book) to provide information by reading books more efficiently anytime and anywhere, E-books can also be useful as a more efficient and effective information media. The Emesis Self-Assessment educational e-book is a digital book to overcome emesis

experienced by pregnant women, which is outlined in the form of an application containing basic knowledge of emesis, habits and interventions that can reduce emesis, diets to prevent emesis, assessment of emesis and healthy food menus that can be compiled by mothers themselves (Sinsin, 2013).

RESEARCH METHODS

In this study, the design used was quasi-experimental with a pre-post-test design approach design with control group, to find out whether there were consequences before and after treatment on the subjects investigated, by providing interventions in the form of self-assessment emesis education E-books, while in the control group health education was carried out through manuals and leaflets about emesis gravidarum (Setyawati & Darma, 2018). This research was conducted from April to October 2022 at the Benda Baru Public Health Center in South Tangerang Region and Public Health Center in Bandar Lampung. The sample used by 60 respondents consisted of a case group of 30 respondents and a control group of 30 respondents. During the implementation of the study, all respondents were actively involved and no one dropped out.

The research activity began with an explanation to respondents on how to use media about emesis gravidarum and how to handle it. In the case group, treatment was given in the form of education using the Emesis Self-Assessment E-book and ended with an assessment of the emesis gravidarum score according to the conditions experienced by each respondent by filling out the emesis gravidarum assessment sheet form before and after the intervention was carried out.

RESULTS AND DISCUSSION

The following describes the differences in respondents' characteristics which include maternal age, gestational age, parity, education and employment in the case group and control group (Azizah, 2021).

Table 1
Distribution of Respondents' Characteristics Based on Maternal Age, Gestational Age, Parity, Education, and Work in Case Groups and Control Groups

Variable	Case Groups					Control Groups				
	mean	min	max	SD	n	mean	min	max	SD	n
Mother's age	29	16	40	5,47	30	29	21	37	4,08	30
Gestational age	12	8	24	7,11	30	14	7	26	5,48	30
Parity	1	0	4	1,1	30	1	0	3	5,48	30

Variable	Case Groups			Control Groups		
	f	Persentase	n	f	Persentase	n
Mother's education :						

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Intermediate	16	53,3	30	9	30	30
High	14	46,7		21	70	
Mother's work:						
Doesn't work	26	86,7	30	22	73,3	30
Work	4	13,3		8	26,7	

Table 1. shows that the age of respondents in both the case group and the control group averaged 29 years, for the average gestational age in the case group there was 12 weeks old while in the control group it was 14 weeks old. The average parity group in the case group and control group was 1 child. The highest number of cases was secondary education with 16 people (53.3%) and the control group was higher education with 21 people (70.0%) (Ritonga & Asiah, 2012). The highest proportion of employment status was non-working mothers, namely in the case group of 26 people (86.7%) while in the control group it was 22 people (73.3%).

Table 2
Distribution of Respondent Characteristics Based on Emesis Gravidarum scores before and after intervention in the Case Group and Control Groups

Variable	Case Groups										Control Groups									
	Pre test					Post test					Pre test					Post test				
	n	Minimal	Maksimal	Mean	SD	n	Minimal	Maksimal	Mean	SD	n	Minimal	Maksimal	Mean	SD	n	Minimal	Maksimal	Mean	SD
Emesis score	30	6	12	8,66	2,57	30	3	8	5,33	1,67	30	8	14	10,46	1,98	30	6	11	7,70	1,34

Table 2. shows that the average emesis gravidarum pretest score in the case group was 8.66 with a standard deviation of 2.57 and the control group was 6.33 with a standard deviation of 1.98. At the time of posttest there was an average difference and decreased in the emesis gravidarum score in the case group of 5.33 with a standard deviation of 1.67 and a control group of 7.70 with a standard deviation of 1.34 (Rochjati, 2011).

Table 3
Average distribution of emesis gravidarum scores according to the Emesis Self-Assessment E-Book education

E-book self assesment emesis	mean	SD	SE	P value	n
Yes	5,33	1,67	0,31	0,0001	30
No	7,70	1,34	0,25		30

From the table above, it can be seen that the average emesis score in mothers who are given education using the E-book emesis self-assessment is 5.33 with a standard deviation of 1.67, while for mothers who are not given education using the E-book emesis self-assessment is 7.70 with a standard deviation of 1.34. The results of the statistical test obtained a p-value of 0.0001, meaning that at alpha 5% it was seen that there was a significant difference in the average

emesis score of mothers who were educated using the E-book emesis self-assessment with those not given (Pebrianty & Dewi, 2020).

Table 4
Early Models. Linear Regression Analysis The Educational Influence of E-book Emesis Self Assessment Against Emesis Gravidarum

Variable	P value	Coefficients	R Square	Constanta	P value (Prob>F)
E-book self assessment emesis	0,0001	-2,320	0,425	4,509	0,0001
Works	0,048	-0,062			
Gestational Age	0,045	-0,160			

Table 5
Final Model. Linear Regression Analysis the Educational Influence of E-book Emesis Self-Assessment Against Emesis Gravidarum

Variable	P value	Coefficients	R Square	Constanta	P value (Prob>F)
E-book self assessment emesis	0,0001	-1,537	0,429	4,598	0,0001
Gestational Age	0,046	-0,214			
Works	0,730	0,039			
Education	0,049	-0,062			

From the table above, it can be seen that the educational variable E-book emesis self-assessment means emesis gravidarum with a P value = 0.0001. Confounding variables are variables of education and gestational age. Coefficient determination R2 (R square) = 0.425, this means that the educational variable E-book emesis self-assessment can explain the variation in emesis gravidarum by 42.5% and the rest is explained by the variables of education and gestational age. P value value (prob>F) = 0.0001 means that the overall regression line equation is significant (SIMANJUNTAK, 2021).

From the characteristic data of respondents, it was obtained that the age of respondents in the case group and control group was on average 29 years old. The average gestational age of the mother in the case group was 12 weeks and in the control group was 14 weeks. The average parity in both the case group and the control group was 2 children. The largest proportion of working status was unemployed mothers in the case group of 21 people (70.0%) while in the control group it was 23 people (76.6%).

The maternal age factor is the risk factor most often associated with hyperemesis gravidarum because it is related to the psychological condition of pregnant women. Parity risk factors are also often linked, some literature mentions vomiting nausea in pregnancy and hyperemesis gravidarum are common in nullipara (Atika, Putra, & Thaib, 2016). Gestational age is also a risk factor for hyperemesis gravidarum, which is related to levels of the chorionic hormone's gonadotropin, estrogens, and progesterone in the mother's blood. Levels of the chorionic hormone gonadotropin in the blood reach their peak in the I trimester of pregnancy. Therefore, nausea and vomiting are more common in the I trimester, but in some cases, some continue until the final trimester (Atika et al., 2016).

Parity is also often linked, some literature mentions vomiting nausea in pregnancy and hyperemesis gravidarum are common in nullipara (Atika et al., 2016). Work related to socioeconomic conditions that affect diet, activity, and stress in pregnant women (Jones et al., 2012). While education can affect a person's knowledge, the higher a person's education, the easier it is to receive information, so the better the knowledge, but someone with a low education is not necessarily low knowledge (Rochkmana & Widyawati, 2018).

Based on the implementation before and after the provision of the Emesis Self-Assessment Educational E-book in the two groups, it showed a difference in the average emesis gravidarum score in the case group with a score of 5.33 with a standard deviation of 1.67, while for mothers who are not given education using the E-book emesis self-assessment is 7.70 with a standard deviation of 1.34. The results of the analysis test obtained p value results = 0.0001, which means that the implementation of the Emesis Self-Assessment E-book education affects emesis gravidarum (Oktavia, Susanti, & Anggalia, 2018).

Emesis Self-Assessment educational e-book is a digital book to overcome emesis experienced by pregnant women, which is outlined in the form of an application containing basic knowledge of emesis, habits and interventions that can reduce emesis, diet to prevent emesis, assessment of emesis and healthy food menus that can be compiled by mothers themselves. This Emesis Self-Assessment educational e-book aims to educate pregnant women so that they are able to manage their own lives, set goals, and provide reinforcement for themselves in dealing with vomiting nausea experienced.

CONCLUSION

The conclusion of this research is to show positive results, where The Emesis Self-Assessment educational e-book can effectively reduce the emesis score by 2.32 after controlling for education and gestational age variables. So, hopefully This Emesis Self-Assessment educational e-book aims to educate pregnant women so that they are able to manage their own lives, set goals, and provide reinforcement for themselves in dealing with vomiting nausea experienced.

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