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Effectiveness of Module Education on Fetal Growth among Chronic Energy Deficient Pregnant women in Kendari, Indonesia

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ABSTRACT The growth of the fetus in the womb is one indicator that determines fetal well-being of the fetus so that prenatal care is needed. Pregnancy care is useful for getting a healthy baby without complications during the first thousand days of life because that period is a golden period or also called a critical period, which if not used properly will cause permanent damage. This study aims to assess the influence of education on the care of pregnancy in pregnant women with chronic energy deficiency in Kendari City. This research contributes to reducing the morbidity and mortality of the fetus in the womb. Research methods was a quasi-experimental design using the pre and posttests. Group 1 was given the education intervention using module. Group 2 was given the education intervention using MCH book. The research samples were as many as 60 people. Data collection instruments were in the forms of the questionnaire, centimeter tape. The data were analyzed by the Wilcoxon and Kruskal Wallis' tests. The results showed that Education increases the knowledge of pregnant women about the care of pregnancy. Education increases the attitude of pregnant women about the care of pregnancy. Education improves the behavior of pregnant women about the care of pregnancy.The implication of this research is to reduce fetal morbidity and mortality in pregnant women with chronic energy deficiency.

INDEX TERM: pregnant women, module, fetal growth, energy deficient

I. INTRODUCTION

The growth of the fetus in the womb is one indicator that determines fetal well-being. Fetal growth according to gestational age marks optimal fetal well-being. An examination of fetal well-being is important during pregnancy to get a healthy baby without complications for the first thousand days of life. The first thousand days of life are a thousand-day period from conception to 2 years old. A thousand days consists of, 270 days during pregnancy and 730 days of the first life since the baby is born. This period is called the golden period or also called the critical time, which if it is not used properly will cause permanent damage (window of opportunity) [1].

Pregnancy with stunted fetal growth (intrauterine growth restriction / IUGR) can cause a variety of negative effects, namely stillbirth (stillbirth) of (9.7%), neonatal death, perinatal morbidity (Clifford et al, 2013) , cerebral palsy and disease [2][3][4]. Stunted fetal growth (IUGR) is also a cause of 50% perinatal death in preterm fetuses and 20% in aterm fetuses [5]. IUGR is often not detected in antenatal examinations and in low-risk pregnancies IUGR that can be detected is only 15% [6]. The results of other studies suggest that fetal growth disorders (IUGR) can be detected by echocardiography when the pregnancy is 6 months [7].

Low birth weight babies (LBW) are also a major problem in the fetus. LBW is one of the main causes of mortality, morbidity and disability in neonates and infants and has a long-term impact on health outcomes in adult life, making it a multifaceted problem in public health. The prevalence of LBW in the world is estimated at 15% where 38% occurs mainly in developing countries. Data from the 2013 Riskesdas shows that the

LBW percentage of 10.2% decreased from 2010, which was 11.1%. The highest proportion of LBW events occurred in Central Sulawesi (16.2%) and the lowest in North Sumatra (8.2%), while in Southeast Sulawesi LBW presentation was 10%. Babies born with low birth weight are at risk of experiencing malnutrition if not handled properly so they are at risk of stunting.

The 2013 Riskesdas data showed the proportion of malnourished children under five was 12.1%, the province with the highest proportion of underweight children under five was NTT (33.2%) and Southeast Sulawesi 23.6%, the proportion of overweight toddlers was 11.9%, proportion stunting toddlers by 37.2%, higher than in 2010 at 36.8%. The proportion of children under five who are stunting in Southeast Sulawesi is 42%, so Indonesia faces multiple nutritional problems, on the one hand experiencing malnutrition on the other hand experiencing excess nutrition [8]. Public health problems have been taken seriously if the prevalence is thin between 10.0-14.0% and is considered critical if ≥15% . Prevalence of thinness in children under five was still 12.1%, which means that thin problems in Indonesia are still a serious public health problem. The adverse effects of these nutritional problems in the short term are disruption of brain development, intelligence, impaired physical growth and metabolic disorders in the body. The bad consequences for the long term are decreasing cognitive abilities and learning achievement, decreasing immunity so that it is easily sick and high risk for the emergence of diabetes, obesity, heart and blood vessels, cancer, stroke, old age disability. All of them reduce the quality of Indonesian human resources, productivity and national competitiveness [2].

One way to prevent disruption of fetal growth and death is to care for pregnant women. Pregnancy care is one of the efforts that can be done to prevent complications of pregnancy and death so that fetal growth and wellbeing becomes optimal. Pregnant women are expected to be able to properly care for the pregnancy. There are several factors that influence the behavior of mothers in caring for their pregnancies, including internal and external factors. Internal factors are age and parity, while external factors are knowledge, attitudes, economics, social culture, geography, support of the closest people, employment and education [9].

The educational approach is the most suitable approach to increase maternal knowledge about pregnancy care through behavioral factors compared to the pressure approach (coercion). Behavior changes generated by education based on knowledge and awareness through the learning process are expected to last long (long lasting) and stay [10]. Class of pregnant women is one way to provide education to pregnant women to increase maternal knowledge about the care of pregnancy and fetal growth in the womb. Knowledge of pregnancy care is the basis for the formation of good care behaviors. The results of study that pregnant women who take classes in pregnant women, care for their pregnancies are better than those who did not take classes in pregnant women. The results of the study state that the pregnant women class increases the knowledge of pregnant women about pregnancy and increases antenatal visits [11]. Classes of pregnant women are also useful for reducing pain during labor, anxiety, stress and depression can improve postpartum maternal quality of life and maternal sel efficacy [5] [6] [12][13].

Classes of pregnant women in Kendari City have been carried out since 2011. Although they have been implemented, cases of maternal and infant mortality are still high. An increase in maternal mortality in Kendari City, where in 2012 the maternal mortality rate of 53 per 100,000 live births increased to 104 per 100,000 live births in 2013. Likewise the rate of complications in pregnancy was 47.67% and those who received handling of 77.81%. The incidence of LBW of 1.54% in 2013 increased to 2.1% in the January to January period. October 2014. The stillbirth rate is 0.34% where 30% is due to LBW. The main cause of maternal death is pregnancy poisoning and infection. This condition is exacerbated by poor nutritional status, too young childbirth, high parity, anemia in pregnancy, insufficient knowledge about the use of health facilities, some pregnant women get late birth assistance at health facilities, delivery assistance by traditional method. In addition, cultural factors also influence. Unicef (2013) states that culture is one of the main causes of nutritional problems [3].

Pregnant women who feel back pain can overcome it by getting enough rest, to the midwife or to the posyandu. The results of interviews with several pregnant women in the Puuwatu and Kadia Sub-Districts of Kendari City stated that in addition to the low socio-economic conditions there were several dietary restrictions on pregnant, childbirth and postpartum mothers, namely eggs because it can complicate labor, meat can cause a lot of bleeding. Time nine (9) months should reduce food so that the baby they contain is small and easily born, salted fish, sea fish, shrimp and crabs cause breast milk to be salty, should not eat food hunted especially animals hunted by husband because it will cause babies to be born disabled and even died this is thought to be a causative factor for the occurrence in pregnant women. Based on this description, the authors are interested in examining the effect of education in the class of pregnant women on fetal growth. The gap in this study is there are still many cases of pregnant women with chronic energy deficiency who have not utilized existing health facilities due to the lack of knowledge of mothers about pregnancy care and also the presence of several other factors that influence the occurance of chronic energy deficiency in pregnant women. The results of this study are expected to increase the knowledge and awareness of pregnant women,

especially pregnant women with chronic energy deficiency, about the benefits of nutrition in pregnancy and the benefits of pregnancy care at health facilities.

II. METHODS

This type of research is observational with a quasi-experimental research design using pre and posttests consisting of 2 groups. Group 1 (intervention group) was given an intervention in the form of a class for pregnant women using a module, while group 2 (a control group) was not given an intervention in the form of a class. This research was conducted in two health centers in Kendari city consisting of Puuwatu Health Center and Mekar Health Center. The research population is all pregnant women who chronic energy deficiency in Kendari city. The research sample is pregnant women with chronic energy deficiency in Kendari city as many as 60 people. The first group is the group that received education in the class of pregnant women and the module (Puuwatu Health Center) total 30 pregnant women. The second group is the control group (Mekar Health Center) who are not given education in the class for pregnant women, only 30 pregnant women are given Module. The sampling technique is simple random sampling. The instrument used in this study is a knowledge questionnaire, an attitude questionnaire. The data obtained were processed using univariable and bivariable analysis. The results of the analysis will be narrated and tabled. The statistical test used was Wicoxon and Kruskal Wallis'test with a significance level of p 0,05 [14][15].

A. INSTRUMENT

The instrument used in this study is a knowledge questionnaire consisting of 20 questions using the Guttman scale, where each question criteria item is given a score of "0" for incorrect answers and a score of "1" for correct answers. And an attitude questionnaire consisting of 20 statements attitude using the Linkert scale. Another instrument used is a module on the development of pregnancy and a guide for pregnant women modified from the Indonesian Ministry of Health's Module. The reliability test of the pregnant women's knowledge questionnaire was carried out on 30 pregnant women with 20 valid question items and Cronbach's alpha value of 0.701 was obtained. Interclass correlation questionnaire obtained a lower limit value of 0.610 and an upper limit of 0.778 with an average measure of interclass correlation of 0.701. This value indicates that this questionnaire is acceptable for assessing the knowledge of pregnant women and testing the validity of the face on 30 pregnant women respondents with biserial point correlation also shows valid results on all question items. The reliability test of the pregnant women's attitude questionnaire was carried out on 30 pregnant women with 20 valid question items and Cronbach's alpha value of 0.690 was obtained. The interclass correlation questionnaire obtained a lower limit value of 0.610 and an upper limit of 0.778 with an average measure of interclass correlation of 0.703. This value indicates that this questionnaire is acceptable for assessing the attitudes of pregnant women and testing the validity of the face on 30 pregnant women respondents with biserial point correlation also shows valid results on all question items.

B. INTERVENTION

The first group is the group that received education in the class of pregnant women and the module for 4 weeks. The second group, the control group, was not given education in the class for pregnant women, only given the MCH handbook.

C. DATA COLLECTION

Initial data collection in October 2017, the researcher conducted a screening to determine the sample according to the inclusion and exclusion criteria by conducting an examination of gestational age. After obtaining the number of pregnant women w and willing to participate, the initial data collection was carried out. After obtaining the sample, the study was conducted in November 2017 (4 weeks) where pregnant women were divided into 2 groups, namely group 1 (intervention) were pregnant women who received education in the form of classes for pregnant women for 4 weeks and were given a module while group 2 (control)) are pregnant women who do not receive education and are only given a MCH handbook. Data were collected by 3 researchers and assisted by research assistants (2 health center midwives).

D. DATA ANALYSIS

The data obtained were processed using univariable and bivariable analysis. The results of the analysis will be narrated and tabled. The statistical test used was Wilcoxon and Kruskal Wallis' tests with a significance level of p 0.05 [14].

III. RESULTS

Characteristics of respondents are characteristics inherent in the respondent including age, ethnicity, education, occupation, history of disease, and parity. Mother's age ranged from 18 years to 35 years. Th on the safe age for pregnancy and childbirth is 20-35 years. So the age grouping is < 20 years and 20-35 years. The original Kendari tribes are Muna, Tolaki, Buton. The other tribes are immigrants so they are classified differently. Education is categorized according to the level of education completed.

TABLE 1
Characteristics of Respondent

Characteristics	Group				P
	1		2		
	n (30)	%	n (30)	%	
Age					0.516
< 20	3	10,0	3	10,0	
20-35	27	90,0	27	90,0	
Ethnic					0.328
Muna	6	20,0	6	20,0	
Buton	3	10,0	1	3,3	
Tolaki	17	56,7	22	73,3	
lainnya	4	13,3	1	3,3	
Education					0.495
SMA	29	96,7	27	90,0	
DIploma	0	0	1	3,3	
S1	1	3,3	2	6,7	
Work					0.335
Work	2	6,7	4	13,3	
No work	28	93,3	26	86,7	
Illness History					0.500
No	28	93,3	29	96,7	
Yes	2	6,7	1	3,3	
Parity					0.500
Prime	1	3,3	0	0	
Multi	29	96,7	30	100	

Source: Primary Data Information:
Group 1: Intervention group
Group 2: Control Group

Employment status is divided based on working and not working. Medical history is the presence or absence of diseases suffered by the mother during pregnancy. Parity is the number of children who have been born alive. Parity was differentiated into nullipara (parity 0, pregnant for the first time) and primipara (parity 1) and multipara if the mother had given birth at least 2 times. Characteristics of respondents can be seen in table 1.

TABEL 2
Changes In The Knowledge Scores Of Respondents Before And After Intervention Based On Intra-Group

Knowledge	Pre test	Post
Group 1 (n=30)	7,90±2,52	13,47±0,68 (0.000)
Group 2 (n=30)	6,73±2,44	7,07±2,52 (0.000)

TABLE 2 shows that all respondents had increased knowledge compared to the pre-test measurements. This shows that there is a difference in knowledge in the pre-test with post-test measurements. The results of statistical tests with Wilcoxon show that respondents' knowledge scores began to be significant in the post test in all groups.

TABLE 3
Changes in Respondents' Attitude Scores Of Respondents Before and After Intervention Based On Intra-Group

Attitude	Pre test	Post
Group 1 (n=30)	5,83 ±1,88	9,03±0,85(0.000)
Group 2 (n=30)	5,87± 2,51	5,70 ± 1,34 (0,000)

TABLE 3 shows that the increase in respondents' attitudes began to be significant in the second measurement (post test), namely in all groups. The results of the statistical test with Wilcoxon showed that respondents' attitude scores began to be significant in the post test in both groups. This shows that there is an influence of education on changes in respondents' attitudes.

TABLE 4
Changes in Respondents' Behavior Scores Of Respondents Before and After Intervention Based on Intra-Groups

Behavior	Pre test	Post
Group 1 (n=30)	9,20 ± 2,455	14,13± 0,94(0.000)
Group 2 (n=30)	8,77 ± 2,37	9,30 ± 2,26 (0,000)

TABLE 4 shows that all respondents had increased pregnancy care behavior compared to the initial measurements. The results of the statistical test with Wilcoxon showed that the respondent's pregnancy care score began significantly in the post test in both groups. This shows that there are differences in gestational care behavior at the beginning of the measurement with the second measurement.

IV. DISCUSSION

The results of this study are in accordance with research which states that the mother's class can improve the mother's knowledge and skills in maintaining her health and her fetus [16][17][18][19] . Health education through the class of pregnant women significantly increases the knowledge of respondents before and after taking classes in pregnant women . Knowledge is not only obtained from the provision of information but from experience, both from one's own experience and those of others [17][20][21].

Increased knowledge in this study is one measure of the success of the class of pregnant women, in which there are cognitive learning activities (learning), through the transformation of sequential information on the respondents. This is in line with Winkel's view in his book Teaching Psychology which states that the learning process is a series of events / events within the subject that take place sequentially starting with the stimulus [22] .

Pregnant women who have good knowledge about pregnancy, their quality of life is better in accepting their pregnancies (Bahrami et al, 2013) and the birth of their babies [23] [24]. Giving knowledge in the class of pregnant women will also increase the self-efficacy of pregnant women so that they can reduce pain, anxiety, stress, fear, depression during labor and postpartum [25][26][26][27]. Providing information about pregnancies in small groups (classes of pregnant women) is more effective than in large groups [28].

The attitudes mainly occurs because of education / training in addition to personal experience, influence, culture, mass media, and emotional person. Factors that play an important role in changing the attitude of respondents in this study are likely to be reactions / responses to classroom training of pregnant women, in addition to the involvement of feeling and emotional factors. The reaction consists of likes and dislikes for the material presented in the class curriculum of pregnant women [20]. The mother's class can improve the mother's attitude to be better in maintaining her health and her baby [20] [23][4].

Attitude is not yet an action or activity, but it is a predisposition to an act of behavior. That attitude is still a closed reaction, not an open reaction or open behavior. Attitude is readiness to react to objects in a particular environment as an appreciation of objects. Health education helps people take a wise attitude towards health and quality of life. Education is a method in health education that can change one's attitude for the better. This is evident from the attitude of the respondents after being given education experienced a change which means that from a negative attitude to be [4][5].

The pregnant women who take the pregnancy class care for their pregnancy better than those who do not take classes in pregnant women. Therefore, it is necessary to increase the socialization of pregnant mothers' class programs through promotion and education so that all pregnant women take classes in pregnant women so that they are able to carry out pregnancy care properly in order to realize optimal maternal and infant health [26][23][25][26].

The class of pregnant women has the goal of forming positive behaviors of mothers with increased knowledge. change the attitudes and behavior of mothers to understand about pregnancy. body changes and complaints during pregnancy. care of pregnancy. from the post-pregnancy period [28]. Classes for pregnant women or Antenatal Class are a means to learn together about health for pregnant women. This activity aims to improve the ability of pregnant women to practice a healthy life, which is related to care for pregnancy, readiness to face childbirth, a safe postpartum period, and becoming a parent plus pregnancy exercise. The implementation of the class of pregnant women will make pregnant women able to apply the things that have been obtained from the class of pregnant women, so that if complications occur or complications during pregnancy can be known as early as possible and can be handled optimally [6].

Information through counseling by health workers. plays an important role in supporting efforts to improve the behavior of pregnant women in antenatal visits. The expectation of the expectant mother's class is expected to be able to encourage the behavior of pregnant women in the utilization of health services. Behavior is formed based on the stimulus to the organism from then the organism responds. Individual response is a complex process that is influenced by knowledge [4]. attitude and behavior. Pregnant women in shaping behavior are also influenced by the knowledge gained. attitude of behavior. The existence of a class of pregnant women is expected to provide a lot of information and skills about pregnancy from the post-pregnancy period. This goal is in line with the results of Turan et al., and Shimpuku, et al , which states that community-based antenatal education programs can improve the utilization of health services during pregnancy [31][32].

V. CONCLUSION

Based on research results can be concluded that Education increases the knowledge, attitude and behavior of pregnant women about the care of pregnancy.

REFERENCES

[1] Kementerian Kesehatan RI, *Pedoman Perencanaan Program Gerakan 1000 hari pertama kehidupan*. Jakarta: Kemenekes RI., 2012.

[2] D. E. Morisky, A. Ang, M. Krousel-Wood, and H. J. Ward, “Predictive validity of a medication adherence measure in an outpatient setting,” *J. Clin. Hypertens.*, vol. 10, no. 5, pp. 348–354, 2008, doi: 10.1111/j.1751-7176.2008.07572.x.

[3] F. Fallah, A. Pourabbas, A. Delpisheh, Y. Veisani, and M. Shadnoush, “Effects of Nutrition Education on Levels of Nutritional Awareness of Pregnant Women in Western Iran,” *Int. J. Endocrinol. Metab.*, vol. 11, no. 3, pp. 175–178, 2013, doi: 10.5812/ijem.9122.

[4] M. Kiely, M. G. Gantz, M. N. El-Khorazaty, and A. A. E. El-Mohandes, “Sequential screening for psychosocial and behavioural risk during pregnancy in a population of urban African Americans,” *BJOG An Int. J. Obstet. Gynaecol.*, vol. 120, no. 11, pp. 1395–1402, 2013, doi: 10.1111/1471-0528.12202.

[5] D. Escott, P. Slade, and H. Spiby, “Preparation for pain management during childbirth: The psychological aspects of coping strategy development in antenatal education,” *Clin. Psychol. Rev.*, vol. 29, no. 7, pp. 617–622, 2009, doi: 10.1016/j.cpr.2009.07.002.

[6] W. Y. Ip, C. S. K. Tang, and W. B. Goggins, “An educational intervention to improve women’s ability to cope with childbirth,” *J. Clin. Nurs.*, vol. 18, no. 15, pp. 2125–2135, 2009, doi: 10.1111/j.1365-2702.2008.02720.x.

[7] B. N. Olagbuji, S. Igbarumah, A. A. Akintayo, B. A. Olofinbiyi, P. O. Aduloju, and O. O. Alao, “Maternal understanding of fetal movement in third trimester: a means for fetal monitoring and reducing stillbirth.,” *Niger. J. Clin. Pract.*, vol. 17, no. 4, pp.

489–494, 2014, doi: 10.4103/1119-3077.134049.
[8] Kementrian Kesehatan RI., *Angka Kecukupan gizi yang dianjurkan bagi bangsa Indonesia*. Jakarta: Kemenkes RI., 2013.
[9] D. A. J. M. Schoenaker, S. S. Soedamah-Muthu, and G. D. Mishra, "The association between dietary factors and gestational hypertension and pre-eclampsia: A systematic review and meta-analysis of observational studies," *BMC Med.*, vol. 12, no. 1, 2014, doi: 10.1186/s12916-014-0157-7.
[10] J. . Hobbins, *Obsestric Ultrasound; artistry in Practice*. New Delhi, India: Blackwell, 2008.
[11] A. D. Popa *et al.*, "Nutritional knowledge as a determinant of vitamin and mineral supplementation during pregnancy," *BMC Public Health*, vol. 13, no. 1, pp. 1–10, 2013, doi: 10.1186/1471-2458-13-1105.
[12] D. K. Horton *et al.*, "Changes in the concentrations of biochemical indicators of diet and nutritional status of pregnant women across pregnancy trimesters in Trujillo, Peru, 2004-2005," *Nutr. J.*, vol. 12, no. 1, p. 1, 2013, doi: 10.1186/1475-2891-12-80.
[13] T. M. Samuel *et al.*, "Correlates of anaemia in pregnant urban South Indian women: A possible role of dietary intake of nutrients that inhibit iron absorption," *Public Health Nutr.*, vol. 16, no. 2, pp. 316–324, 2013, doi: 10.1017/S136898001200119X.
[14] P. U. Gio and R. E. Caraka, *Pedoman Dasar Mengolah data dengan Program Aplikasi Statistika*. Medan: USU PRESS, 2018.
[15] Kartini, "Hubungan anemia dalam kehamilan dengan panjang badan bayi baru lahir di Rumah Sakit Benyamin Guluh Kabupatekn Kolaka.," *Heal. Inf. J. Penelit.*, vol. 10, no. 1, 2018.
[16] K. Azhar, I. Dharmayanti, D. H. Tjandrarini, and P. S. Hidayangsih, "The influence of pregnancy classes on the use of maternal health services in Indonesia," *BMC Public Health*, vol. 20, no. 1, pp. 1–10, 2020, doi: 10.1186/s12889-020-08492-0.
[17] Z. Lubis, "Status Gizi Ibu Hamil Serta Pengaruhnya Terhadap Bayi yang Dilahirkan," *Tersedia di Zulhaida@ telkom. net*, no. November, 2003.
[18] J. K. Rempel, L. A. Rempel, D. T. P. Hoa, L. T. Vui, and T. K. Long, "Parenting Teamwork: The Impact of a Fathering Intervention on Mothers and Infants in Vietnam," *Child Dev.*, vol. 91, no. 2, pp. e345–e364, 2020, doi: 10.1111/cdev.13244.
[19] K. Kartini, M. Syafar, A. A. A., and B. Bahar, "Effect of Education on the Fetus Growth in Content in Kendari Southeast Sulawesi Province," *Int. J. Sci. Basic Appl. Res.*, vol. 26, no. 3, pp. 122–137, 2016.
[20] A. Mizawati and R. Patroni, "The Influence of Pregnancy Class In Improving Knowledge And Skills Of Pregnant Mother About Maternal And Child Health," vol. 14, no. Icihc 2018, 2019, doi: 10.2991/icihc-18.2019.21.
[21] A. D. Laksono, R. D. Wulandari, M. Ibad, and I. Kusrini, "The effects of mother's education on achieving exclusive breastfeeding in Indonesia," *BMC Public Health*, vol. 21, no. 1, pp. 1–6, 2021, doi: 10.1186/s12889-020-10018-7.
[22] W. . Winkel, *Psikologi Pengajaran*. Jogjakarta: Jurusan Ilmu Pendidikan Fakultas Keguruan dan Ilmu Pendidikan, 2005.
[23] N. Bahrami, M. Simbar, and S. Bahrami, "Bahrami N, Simbar M, Bahrami S. The Effect of Prenatal Education on Mother's Quality of Life during First Year Postpartum among Iranian Women: A Randomized Controlled Trial.," *Int J Fertil Steril*, vol. 7, no. 4, pp. 169–174, 2013, [Online]. Available: pmid: 24520482; PMCID: PMC3914493.%0A%0A
[24] K. K. Ferguson, T. F. McElrath, Y. A. Ko, B. Mukherjee, and J. D. Meeker, "Variability in urinary phthalate metabolite levels across pregnancy and sensitive windows of exposure for the risk of preterm birth," *Environ. Int.*, vol. 70, pp. 118–124, 2014, doi: 10.1016/j.envint.2014.05.016.
[25] I. S. Yim, L. M. Glynn, C. D. Schetter, C. J. Hobel, A. Chicz-DeMet, and C. A. Sandman, "Risk of postpartum depressive symptoms with elevated corticotropin- releasing hormone in human pregnancy," *Arch. Gen. Psychiatry*, vol. 66, no. 2, pp. 162–169, 2009, doi: 10.1001/archgenpsychiatry.2008.533.
[26] S. J, S. H, G. S, S. A, and D. D, *Midwife-led continuity models versus other models of care for childbearing women (review)*, vol. 19, no. 3. 2016. doi: 10.1002/14651858.CD004667.pub5.www.cochranelibrary.com .
[27] I. Benediktsson, S. W. McDonald, M. Vekved, D. a McNeil, S. M. Dolan, and S. C. Tough, "Comparing CenteringPregnancy® to standard prenatal care plus prenatal education.Benediktsson, I., McDonald, S. W., Vekved, M., McNeil, D. a, Dolan, S. M., & Tough, S. C. (2013). Comparing CenteringPregnancy® to standard prenatal care plus prenatal educati," *BMC Pregnancy Childbirth*, vol. 13 Suppl 1, no. Suppl 1, p. S5, 2013, [Online]. Available: http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=3561159&tool=pmcentrez&rendertype=abstract
[28] C. S. Brixval, S. F. Axelsen, S. G. Lauemøller, S. K. Andersen, P. Due, and V. Koushede, "The effect of antenatal education in small classes on obstetric and psycho-social outcomes - a systematic review," *Syst. Rev.*, vol. 4, no. 1, pp. 1–9, 2015, doi: 10.1186/s13643-015-0010-x.
[29] jakarta R. Universitas Bhayangkara, "International Seminar New Security Challenge: Facing Cyber Threats From Multidisciplinary Apporach 2nd December 2019.," *Int. Semin. New Secur. Chalenge*, no. December, pp. 99–108, 2019.
[30] E. Ruiz-Mirazo, M. Lopez-Yarto, and S. D. McDonald, "Group Prenatal Care Versus Individual Prenatal Care: A Systematic Review and Meta-Analyses," *J. Obstet. Gynaecol. Canada*, vol. 34, no. 3, pp. 223–229, 2012, doi: 10.1016/S1701-2163(16)35182-9.
[31] J. M. Turan and L. Say, "Community-based antenatal education in Istanbul, Turkey: Effects on health behaviours," *Health Policy Plan.*, vol. 18, no. 4, pp. 391–398, 2003, doi: 10.1093/heapol/czg047.
[32] Y. Shimpuku, F. E. Madeni, S. Horiuchi, K. Kubota, and S. C. Leshabari, "A family-oriented antenatal education program to improve birth preparedness and maternal-infant birth outcomes: A cross sectional evaluation study," *Reprod. Health*, vol. 16, no. 1, pp. 1–10, 2019, doi: 10.1186/s12978-019-0776-8.