Journal Of Health Science Community
ISSN: 2714 7789 (print) – 2745 3561 (online)
DOI : https://doi.org/10.30994/jhsc.v4i2.198
Vol.4 No.2 November 2023 Page. 62-68

The Effect Of M-B-C (*Mind-Body-Counseling*) Nursing Care Module On Cooping Strategies, Clinical Symptoms And Fetal Well-Being In Preeclampsia Mothers

Yenny Puspitasari[1], Arina Chusnatayaini[2]
[1,2]Institut Ilmu Kesehatan STRADA Indonesia
Corresponding author: yennypuspita80@iik-strada.ac.id

ABSTRACT

Preeclampsia is the most common complication, with an increasing incidence in the world, and is associated with maternal morbidity and mortality, which is around 2-8% of pregnancies. Mind-Body-Counseling (M-B-C) nursing care emphasizes the physical and psychological care that is needed in the management of preeclampsia patients.Objective: To explain the effect of Mind-Body-Counseling (M-B-C) nursing care on coping strategies, clinical symptoms, and fetal well-being in preeclampsia mothers. The research was conducted in two stages, the first stage (module building) and the second stage (quantitative analysis). Phase I of the research was carried out with literature review, qualitative research, and expert review to produce the Mind-Body-Counseling Module which was carried out in a period of approximately two months at RSUD dr. Soedomo Trenggalek. Phase II of the study was an experiment with the division of case and control groups with a total of 60 respondents who were mothers with preeclampsia at RSUD dr. Soetomo Surabaya. Mind-Body-Counseling (M-B-C) nursing care is provided with three assessments, namely coping strategies, clinical symptoms, and fetal well-being. The assessment used a questionnaire and was analyzed using descriptive analysis and the Wilcoxon test. The Mind-Body-Counseling (MBC) nursing care module consists of mind interventions to identify problems and stress responses, counseling interventions so that clients understand pregnancy with preeclampsia, and body interventions to reduce clinical symptoms. The results of the Phase II study showed a significant difference in coping strategy scores (p=0.000), systolic blood pressure (p=0.001), diastolic blood pressure (=0.018), urine protein (p=0.000), and fetal well-being (p=0.000) between control and intervention groups. After the intervention, it was concluded that there was a significant effect between Mind-Body-Counseling (MBC) nursing care on improving coping strategies, decreasing clinical symptoms, and increasing fetal well-being in preeclampsia mothers.

Keywords: Preeclampsia, Nursing Care, Clinical Symptoms, Fetal Well-Being, Coping Strategies

INTRODUCTION

Pregnancy is associated with significant chronic stress. In complicated pregnancies including preeclampsia, it is usually manifested by interruption *mood* and anxiety. Chronic stress is defined here as the cumulative burden of daily mild stressful situations and the long-term effects of physiological responses to stress, also known as allostatic load (Vianna, 2011). Allostatic load greatly reduces the quality of life of patients and is responsible for high morbidity and mortality. Several studies have shown that depression, anxiety and psychopathological conditions during pregnancy are important risk factors for fetal loss, premature birth and low birth weight babies (Vianna, 2011).

Clinical examination of the mother such as blood pressure and urine protein is important during pregnancy. WHO World Health Organization (*World Health Organization*) estimates that around 15% of all pregnant women will develop complications related to their pregnancy which can result in maternal and fetal death. Good fetal monitoring is associated with increased perinatal morbidity and mortality, so it is closely related to fetal well-being (RSPAD, 2006).

Fetal welfare problems are closely related to the incidence of asphyxia and LBW, namely 16% worldwide (UNICEF and WHO, 2004) and around 9-30% in Indonesia (IDAI, 2009). Preeclampsia nursing care currently only focuses on the physical, there is no holistic nursing care for preeclampsia women who are undergoing conservative treatment. Nursing care *Mind-Body-Counseling* (M-B-C) is a nursing care designed to provide holistic interventions for women with preeclampsia who are undergoing conservative treatment. Nursing care *Mind-Body-Counseling* (M-B-C) aims to support conservative therapy by providing reduced stress, anxiety and increased comfort for mothers who have undergone conservative treatment for preeclampsia.

Preeclampsia is characterized by the development of hypertension and proteinuria after 20 weeks of gestation (Williamson, 2018). It occurs secondary to abnormal placentation in early pregnancy, resulting from impaired placental trophoblastic invasion and subsequent generation from ischemic environments. Placental ischemia causes an increase in placental oxidative stress which leads to passage *syncytiotrophoblast* into the maternal circulation and initiates the maternal inflammatory response and subsequent endothelial dysfunction (Williamson, 2018).

Psychological function is a supporting factor that increases the risk of pregnant women experiencing hypertension. The results showed that the relationship between psychological function and incident hypertension affects physiological changes such as inflammation, changes in autonomic nerves, hypothalamic-pituitary-adrenal activity (Thombre, 2015).

The increasing threat to mothers and babies in increasing morbidity and mortality in infants is due to one of them being preeclampsia. Factors that contribute to infant mortality of mothers with preeclampsia are the mother's age, gestational age and method of delivery (Ernawati*et al*, 2018). The incidence of preeclampsia is around 5-8% of all pregnancies, the incidence of preeclampsia in the second pregnancy is less than 1% of pregnant women with normal blood pressure during the first pregnancy (Kalkunte, 2010). The number of cases of infant mortality fell from 33,278 in 2015 to 32,007 in 2016 and in 2017 there were 10,294 cases. Similarly, the maternal mortality rate fell from 4,999 in 2015 to 4,912 in 2016 and in 2017 there were 1,712 cases. Even though it has decreased, the figure is still high (Ernawati*et al*, 2018).

In the management of preeclampsia nursing care there is no definitive strategy to prevent preeclampsia limiting the ability of nurses to provide anticipatory guidance and teach patients evidence-based approaches to reduce the risk of preeclampsia through activities*screening* preeclampsia, early detection of signs of preeclampsia, accurate measurement of blood pressure, evaluation of changes in body weight, survey and diagnosis of preeclampsia, timing of appropriate referrals, pharmacological treatment, long-term risk of cardiovascular disease (Approaches and Management, 2017).

Nursing care given to preeclampsia patients at this time can be improved with the system *supportive-educational*, to care for pregnant women with preeclampsia and the health of their fetuses. Roy's adaptation model explains that humans are biopsychosocial creatures as a unified whole (Shobeiri, 2016). Therefore it is necessary to examine how the M-B-C nursing care module influences coping strategies, clinical symptoms and fetal well-being in pregnant women with preeclampsia. The purpose of this research is to develop and prove the module *Mind-Body-Counseling* (M-B-C) to improve coping strategies, reduce clinical symptoms and improve fetal well-being in preeclampsia mothers

METHOD

This research was conducted through two stages of research, namely the first stage was qualitative research with an exploratory descriptive approach, expert discussion and module preparation, the second stage was quantitative with a design *quasi experiment* intervene. This research is research *mixed methods* which is *exploratory* namely research conducted starting from qualitative then quantitative. Phase I of the research was conducted to produce modules *Mind-Body-Counseling* carried out in a period of approximately 2 months at RSUD dr. Soedomo Trenggalek. Phase II of the study was an experiment with the division of case and control groups with a total of 60 respondents from women with preeclampsia at dr. Sutomo Surabaya. Nursing care *Mind-Body-Counseling* (M-B-C) is given with three assessments, namely coping strategies, clinical symptoms and fetal well-being.

RESULTS

The stage of making this research module was carried out in the Gynecology Poly Room of RSUD dr. Soedomo Trenggalek. RSUD dr. Soedomo Trenggalek is an accredited type C Hospital belonging to the Trenggalek Regency government. RSUD dr. Soedomo has quite complete facilities and is the only RSUD in Trenggalek Regency. So that this RSUD becomes a referral hospital from all regions of Trenggalek Regency. The average monthly visit to the Conservative Treatment Room at RSUD dr. Soetomo for 50-60 patients/month. While the number of visits of patients with gestational hypertension in RSUD dr. Soedomo of 20-25 patients/month.

The results of the phase I study (qualitative) showed that mothers with preeclampsia really needed therapy to make them more comfortable (theme 6) and reduce the stress they felt (theme 5). This is because mothers with preeclampsia feel a significant stressor, namely a threat to their own and their baby's safety (theme 1) and fears that treatment is not going well (theme 4). These two things greatly affect the coping mechanism that will be carried out, namely the mother will try to strengthen herself (theme 3). In addition to psychological complaints, mothers with preeclampsia also feel physical discomfort (theme 2) ranging from dizziness, weakness, dictionary eyes and swollen feet. Sub theme 6 shows that mothers with preeclampsia feel more relaxed when given therapy *mind* with *guided imagery* and *aromatherapy,* felt more comfortable and less dizzy after receiving therapy *body* with progressive muscle relaxation and feel the anxiety is reduced after being given therapy *counseling.* This shows that the nursing care module *Mind-Body-Counseling* (MBC) has the potential to improve coping strategies, reduce clinical symptoms and improve fetal well-being in preeclampsia mothers. The results of phase II research showed the results of data normality, data homogeneity, Wilcoxon test and test *man Whitney*.

1. General characteristics of respondents

This study involved 60 respondents who were divided into two groups. The distribution of respondents was 30 subjects in the control group and 30 subjects in the intervention group. The description of the characteristics of the respondents between the control group and the intervention group was tested with *Kolmogorov Smrinov* and *Levene Test*, to determine the normality and homogeneity of the data. After that, a bivariate test was carried out. The distribution table for the general characteristics of the respondents can be explained in table 1 as follows:

Table 1 General Characteristics of Respondents Between Two Groups i.e. 60 Respondents (n = 60)

Variable	Category	Intervention Group		Control Group		Total	
		n	%	n	%	n	%
Age of pregnant woman	< 20 years	0	0	0	0	0	0
	20-35 years	15	50,0	13	43,3	28	46,7
	> 35 years	15	50,0	17	56,7	32	53,3
Mother's education level	Basic education	8	26,7	12	40,0	20	33,3
	Secondary education	17	56,7	16	53,3	33	55,0
	Higher education	5	16,6	2	6,7	7	11,7
Mother's income	Yes	20	66,7	24	54,5	44	73,3
	No	10	33,3	6	37,5	16	26,7
Mother's job	Work	8	26,8	6	20,0	6	23,3
	Doesn't work	22	73,2	24	80,0	46	76,7
History of miscarriage	No	21	70,0	24	80,0	45	75,0
	Yes	9	30,0	6	20,0	15	25,0
Number of pregnancies	Primipara	6	20,0	9	30,0	15	25,0
	Multipara	23	76,7	19	63,3	42	70,0
	big multipara	1	3,3	2	6,7	3	5,0
History of twin pregnancy	No	26	86,7	27	90,0	53	88,3
	Yes	4	13,3	3	10,0	7	11,7
History of illness during pregnancy	No	22	73,3	23	76,7	45	75,0
	Yes	8	26,7	7	23,3	15	25,0
Prior history of preeclampsia	No	20	66,7	22	73,3	42	70,0
	Yes	10	33,3	8	26,7	18	30,0
Maternal BMI during pregnancy	*Underweight*	2	6,7	4	13,1	6	10,0
	Normal	5	16,7	9	30,0	14	23,3
	Overweight	1	3,3	9	30,0	10	16,7
	Obesity I	9	30,0	3	10,0	12	20,0
	Obesity II	13	21,7	5	8,3	18	30,0
Pregnancy spacing	3-5 years	20	66,7	11	36,7	31	51,7
	<3 years	3	10,0	10	33,3	13	21,7
	>5 years	7	23,3	9	30,0	16	26,7

Table 1 shows that the majority of respondents are over 35 years old in all groups, namely 32 respondents (53.3%), have a secondary education level (high school or equivalent), namely 33 respondents (55.0%). The majority of respondents have income, namely 44 respondents (73.3%), do not work, namely 46 respondents (76.7%). Most of the respondents did not have a history of miscarriage, namely 45 respondents (75.0%). Most respondents were in the multipara category, namely 42 respondents (70.0%), did not have a history of twin pregnancies, namely 53 respondents (88.3%), had no history of illness during pregnancy, namely 45 respondents (75.0%) and had no history of preeclampsia. Previously, there were 42 respondents (70.0%). Most of the respondents were in the category of obesity II, namely 18 respondents (30.0%) and most of the respondents had a 3-5 year gestation interval, namely 31 respondents (51.7%).

2. Hypothesis testing

The independent variable in the research is nursing care *Mind-Body-Counseling* (MBC), while the dependent variables in the study were coping strategies, clinical symptoms and fetal well-being. In the following bivariate analysis, the results of the bivariate analysis explain the effect of the independent variables on the dependent. To test before and after the MBC nursing care intervention using the Wilcoxon test. for test *after this* using a different test *Mann-Whitney* to determine which group is most meaningful to coping strategies, clinical symptoms and fetal well-being. Table 2 is the results of the Wilcoxon test before and after being given nursing care *Mind-Body-Counseling* (MBC) in the intervention group.

Table 2: Wilcoxon Test Effect of *Mind-Body-Counseling* (MBC) Against Coping Strategies, Clinical Symptoms and Fetal Welfare in the Intervention and Control Groups

Variable	Intervention Group				Control Group			
	Negative ranks	Positive ranks	Ties	p value	Negative ranks	Positive ranks	Ties	p value
Coping strategy	0	28	2	0,000	3	5	22	0,470
Systolic blood pressure (mmHg)	23	2	5	0,000	9	15	6	0,808
Diastolic blood pressure (mmHg)	28	0	2	0,000	21	3	6	0,001
Protein urine (mg/dL)	24	4	2	0,000	6	19	5	0,075
Fetal well-being	0	27	3	0,000	0	5	25	0,025

Table 2 shows the results of the analysis before and after being given treatment in the intervention group using a test *Wilcoxon* shows that p = 0.000 (p <0.05), so it can be concluded that there are differences in coping strategies in mothers who are given nursing care interventions *Mind-Body-Counseling* (MBC) in the intervention group. The results of the before and after analysis without treatment in the control group using the test *Wilcoxon* showed that p = 0.470 (p ≥ 0.05), so it can be concluded that there were no differences in coping strategies for mothers in the control group. The results of the analysis before and after being given treatment in the intervention group using a test *Wilcoxon* shows that p = 0.000 (p <0.05), so it can be concluded that there are differences in systolic blood pressure in mothers who are given nursing care interventions *Mind-Body-Counseling* (MBC) in the intervention group. The results of the analysis before and after being given treatment in the control group using the test *Wilcoxon* showed that p = 0.808 (p ≥ 0.05), so it can be concluded that there was no difference in systolic blood pressure in mothers in the control group. The results of the analysis before and after being given treatment in the intervention group using a test *Wilcoxon* shows that p = 0.000 (p <0.05), so it can be concluded that there are differences in diastolic blood pressure in mothers who are given nursing care interventions *Mind-Body-Counseling* (MBC) in the intervention group. The results of the analysis before and after being given treatment in the control group using the test *Wilcoxon* showed that p = 0.001 (p <0.05), so it can be concluded that there are differences in diastolic blood pressure in mothers in the control group. The results of the analysis before and after being given treatment in the intervention group using a test *Wilcoxon* shows that p = 0.000 (p <0.05), so it can be concluded that there are differences in urine protein in mothers who are given nursing care interventions *Mind-Body-Counseling* (MBC) in the intervention group. The results of the analysis before and after being given treatment in the control group using the test *Wilcoxon* showed that p = 0.075 (p ≥ 0.05), so it can be concluded that there was no difference in urine protein in mothers in the control group. The results of the analysis before and after being given treatment in the intervention group using a test *Wilcoxon* shows that p = 0.000 (p <0.05), so it can be concluded that there are differences in fetal well-being in mothers who are given nursing care interventions *Mind-Body-Counseling* (MBC) in the intervention group. The results of the before and after analysis

without treatment in the control group using the test *Wilcoxon* showed that p = 0.025 (p <0.05), so it can be concluded that there are differences in fetal well-being in mothers in the control group.

Table 3 is the result of the Mann Whitney test on the effect of nursing care *Mind-Body-Counseling* (MBC) in the intervention group.

Table 3 Mann Whitney Test of the Effect of *Mind-Body-Counseling* (MBC) Against Coping Strategies, Clinical Symptoms and Fetal Welfare in the Intervention and Control Groups

Variable	Group	n	*P (Mann Whitney)*
Coping strategy	Intervention	30	0,000
	Control	30	
Systolic blood pressure	Intervention	30	0,001
	Control	30	
Diastolic blood pressure	Intervention	30	0,018
	Control	30	
Protein urine	Intervention	30	0,000
	Control	30	
Fetal well-being	Intervention	30	0,000
	Control	30	

In table 3 the test results are different from *man Whitney* showed that there were significant differences for coping strategies (p=0.000), systolic blood pressure (p=0.001), diastolic blood pressure (p=0.018), urine protein (p=0.000) and fetal well-being (p=0.000) between groups given nursing interventions *Mind-Body-Counseling* (MBC) with a control group.

DISCUSSION

The results of the hypothesis test above show that nursing care *Mind-Body-Counseling* (MBC) is proven to improve coping strategies. This occurs due to reduced stress and anxiety in preeclampsia mothers through therapy *Mind* and *Body* will make the mother more relaxed so that she can focus more on thinking to overcome the problem. Besides *counseling* make *self-efficacy* mothers improve and mothers have the knowledge to adapt to their conditions. This is what makes coping strategies for preeclampsia mothers improve through nursing care *Mind-Body-Counseling* (MBC).

A decrease in clinical symptoms and an increase in fetal well-being is greatly influenced by the stability of the blood pressure of mothers with preeclampsia during treatment. Reducing stress and anxiety through nursing care *Mind-Body-Counseling* (MBC) makes the mother's blood pressure relatively more stable. *Aromatherapy* lavender, ylang-ylang and bergamoth will reduce the stress response and help reduce the hormone cortisol, so that blood pressure can be lowered and controlled. *Guided Imagery*, Progressive Muscle Relaxation Therapy and counseling reduce stress and anxiety for the mother, so that the perception of pain will decrease and make the clinical symptoms felt less. All conditions in the mother have a direct effect on improving the welfare of the fetus because of the good supply of oxygen and food due to smooth blood circulation.

CONCLUSIONS

Conclusion of the nursing care module *Mind-Body-Counseling* (MBC) affected the improvement of coping strategies, decreased clinical symptoms and increased fetal well-being in preeclampsia women who were treated conservatively. Consists of intervention *mind* to recognize problems, stress response and stress management; intervention *counseling* so that the client understands her pregnancy and intervention *body* to help control blood pressure.

The researcher's suggestion for pregnant women is to apply the intervention of the nursing care module *Mind-Body-Counseling* (MBC) in the first trimester of pregnancy. This is due to the benefits of providing nursing care *Mind-Body-Counseling* (MBC) which positively improves the health of pregnant women and the fetus. Health workers are willing to apply nursing care *Mind-Body-Counseling* (MBC) in the care of pregnant women with preeclampsia. So that it can improve the mother's coping strategies, reduce clinical symptoms and improve fetal well-being.

REFERENCES

Approaches, C., & Management, N. (n.d.). *Preeclampsia : Current Approaches to Nursing Management*. *117*(11).

RSPAD. (2006). Standarisasi Pemantauan Kesejahteraan Janin.

Shobeiri, F., Doosti, F., Oshvandi, K., & Soltanian, A. (2016). The effect of orem's self care model on control of preeclampsia in pregnant women: A randomized clinical trial. In *Research Journal of Pharmaceutical, Biological and Chemical Sciences* (Vol. 7, Issue 4).

Thombre, M. K., Talge, N. M., & Holzman, C. (2015). Association Between Pre-Pregnancy Depression/Anxiety Symptoms and Hypertensive Disorders of Pregnancy. *Journal of Women's Health*, *24*(3), 228–236. https://doi.org/10.1089/jwh.2014.4902

Vianna, P., Bauer, M. E., Dornfeld, D., & Chies, J. A. B. (2011). Distress conditions during pregnancy may lead to pre-eclampsia by increasing cortisol levels and altering lymphocyte sensitivity to glucocorticoids. *Medical Hypotheses*, *77*(2), 188–191. https://doi.org/10.1016/j.mehy.2011.04.007

Williamson, McCarthy, Khashan, Totorika, Kenny, & McCarthyl. (2018). Exploring the role of mitochondrial dysfunction in the pathophysiology of pre-eclampsia. *Pregnancy Hypertension*, *13*(June), 248–253. https://doi.org/10.1016/j.preghy.2018.06.012