

The Impact of Coping Classes toward Anxiety Level, and Coping Ability during Labor

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Keywords: Smart Mother Classes, Anxiety, Coping Ability, Labor.

Abstract: **Backgrounds:** Coping efforts carried out during pregnancy are very meaningful to influence pregnancy outcomes and better birth, by minimizing or preventing negative influences from emotional, behavioral, cognitive, and physiological responses.

Objectives: This study aims to analyze the impact of coping classes on anxiety levels and coping abilities during labor.

Methods: This research was a type of experimental research design that used a Pre-test post-test control group design. The samples were chosen randomly for 60 pregnant women who were given standard classes plus coping classes and 60 pregnant women who were given standard pregnant mother classes which were carried out in 12 clinics. Mother was given a class of 4 meetings. Measurements were taken three times before the intervention, 4 weeks after the intervention, and during labor. This study used repeated ANOVA Post Hoc LSD.

Results: The results showed that the score of anxiety in the intervention group at the second measurement was lower as much as 0.896 ($p = 0.502$) and the score of anxiety during labor was lower as much as 0.563 ($p = 0.683$) than the control. The coping ability of the intervention group after the fourth week was higher by 1.740 ($p = 0.284$) and the coping ability of the intervention group at birth was higher by 3.942 ($p = 0.030$) than the control group and the difference was significant.

Conclusion: The mother's classes Plus Coping Skills affect the level of anxiety, and coping skills during delivery. Providing midwifery care uses continuity of care so that it can monitor and optimize preventive and promotive effects.

1 INTRODUCTION

Pregnancy is a process that changes both physically and psychologically for the mother (Hikmah et al., 2019). Pregnancy is a major event in a woman's life, not only affecting psychological, but also biological, familial, and social domains (Lahti et al., 2017).

During pregnancy, there are significant changes that can contribute to increased anxiety. (Corbijn van Willenswaard et al., 2017) The prevalence of anxiety disorders during pregnancy in developed and developing countries is 10-25%. (Shahhosseini et al., 2015) Meta-analysis of 102 studies found that the prevalence of anxiety in pregnancy was 18.2% in the first trimester and increased to 24.6% in the third trimester. (Willenswaard et al., 2017) The results of research in Indonesia stated that there were 26.4% of

pregnant women experiencing anxiety (Hanifah & Utami, 2019).

Pregnant women with anxiety during pregnancy were shown to be three times more at risk of postnatal depression and harmed the child's psychological state. Anxiety conditions can increase the hormone cortisol in utero so it is associated with impaired cognitive development, behavioral problems, and long-term emotions (Shrestha & Kd, 2018). In addition, anxiety in pregnancy can affect the outcome of childbirth (Zijlmans et al., 2017). Symptoms of anxiety in pregnancy are related to the increased fetal heart, fetal emergency, congenital malformation, premature labor, and low body weight (Gejala & Hasananzadeh, 2017; Shapiro et al., 2017; Yonkers, K Hayden, K Forray, 2017). In Indonesia alone the prevalence of Low Birth Weight (BBLR) is 6.2%

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(Kesehatan, 2018). Many bad consequences result from maternal anxiety during pregnancy. Prevalence is high, but a new study finds treatment rates are still low (Kingston et al., 2017).

Pregnant women with anxiety have certain characteristics and are affected by the environment. Pregnant women with anxiety are influenced by cultural background, tend to have a history of infertility, unplanned pregnancies, and have low psychosocial resources thus increasing anxiety. This process can affect the mother, placenta, and fetal systems especially when it occurs early in pregnancy which is a sensitive period. (Dunkel Schetter & Tanner, 2012) It is widely recognized that anxiety in pregnancy can affect the neuro-endocrine development of the fetus which will also affect the emotional development of the fetus. (Olanike Busari, 2018) anxiety in pregnancy is also associated with the incidence of short gestational age and fetal nerve development. Mothers who experience anxiety may also experience disorders during the postpartum period (Dunkel Schetter & Tanner, 2012).

Anxiety during pregnancy is considered one of the risk factors for fetal development because it can harm the fetus related to prematurity, BBLR, childbirth outcomes, and complications such as bleeding and the risk of abortion. Anxiety levels will increase in the III trimester of pregnancy. The anxiety is associated with getting closer to the time of delivery. Facts show the time approaching childbirth as a vulnerable condition and trigger even feelings of fear for mothers who have been pregnant before. These feelings of fear are more likely to develop into anxiety (Nogueira & Alfenas, 2017).

Coping efforts carried out during pregnancy are very meaningful to influence better pregnancy and birth outcomes, by minimizing or preventing the negative effects of emotional, behavioral, cognitive, and physiological responses against stress. Coping skills serve to select and implement appropriate measures to cope with stress and as a defense resource for pregnant women and children from the potentially harmful effects of exposure to prenatal stress. A study of coping skill training done on diabetes type 1 showed that coping skill training decreases depression, anxiety, and stress among adolescents with type 1 diabetes. (Edraki et al., 2018) Another study that has done coping skill training during pregnancy and measured after 4 weeks also showed that coping skill training can decrease stress during pregnancy and increase self-efficacy during pregnancy. (Runjati et al., 2017) Coping responses are associated with more favorable indicators of psychological well-being. Coping during pregnancy

through positive assessment with an effort to create positive meaning focused on personal development is associated with better outcomes for mother and baby, fewer depressive symptoms, and fewer problems in pregnancy (Pakenham, KI; Smith A; Rattan, 2007).

In addition, one of the efforts to prevent problems and complications during pregnancy is to increase the knowledge of pregnant women and prepare for childbirth, namely through classes for pregnant women which are carried out on an ongoing basis. (Emiyanti et al., 2017) The antenatal classes for pregnant women are expected to better prepare mothers psychologically and increase their knowledge about pregnancy and the birthing process so that it can help reduce maternal anxiety facing childbirth. The study showed that physical and mental changes caused by pregnancy, causing high levels of stress, which is associated with adverse outcomes for the mother and fetus and pregnant women require coping strategies during pregnancy to combat these created challenges. Coping with stress in mothers is very important because it affects the mental health of the mother and baby.

Other studies, especially on pregnant women, have integrated mother classes activities with maternal coping skills which allow mothers not only to benefit from aspects of pregnancy and birth care practices as well as postpartum and infant care but also to help mothers with emotional aspects in dealing with stress and confidence to face delivery during pregnancy (Runjati et al., 2017), but the study that integrated coping skill with mother classes stress have not yet measured the mother's condition such as anxiety and coping ability until the delivery process by looking at the anxiety and coping ability outcome when at labor process. This study aims to analyze the impact of coping classes on anxiety levels and coping abilities during labor

2 METHODS

This research is a type of research *experimental design*. The design of this study used a pre-test post-test control group design. The population in this study were all primiparous pregnant women in the early 3rd trimester (28-34 weeks gestation) at the Semarang City Health Center that meet inclusion criteria as normal pregnancy and exclusion criteria as a single parent. The sampling method was cluster random sampling for 12 public health centers from 35 public health centers and then random allocation to be experimental group and control group. The experimental groups were given the combination of

coping skills and standard antenatal education method (n=60) pregnant women in 6 clinics and each clinic 10 mothers chosen randomly from each clinic, while the control groups were given only standard antenatal classes (n=60) pregnant women at 6 clinics and each clinic there were 10 mothers also chosen randomly.

The Experimental groups were treated using antenatal standard classes developed by the ministry of health as a government program during antenatal care and combine with coping skill education developed by the previous study. The module of antenatal classes has been developed by the ministry of health as standard antenatal education as part of antenatal care. While module of coping skill education has been developed from previous research and revised. (Runjati et al., 2017) Education classes and coping skill classes were done four times in four weeks and measured three times: before the treatment, in the fourth weeks after the last treatment, and during the delivery process for Anxiety and coping ability during Labour.

The intervention was done by trained midwives using the module of antenatal classes and the module of coping skill education. The midwives who held intervention groups were trained not only in antenatal classes but also in coping skill education. While the midwives who held the control group were trained only in antenatal classes. The duration of the intervention for each class for only standard antenatal classes for 45 minutes and coping skill education for 45 minutes which the whole duration was about 1.30 minutes. The classes run four times for four weeks.

While The Control groups were given only standard antenatal Classes four times in four weeks and measured three times: before the treatment, in the fourth weeks after the last treatment, and during the delivery process for Anxiety and coping ability during Labour. Pregnant women were measured using anxiety scale instruments developed by a previous study that has 26 questions with aspect psychology and physiology with the result of validity score was 0,366 s/d 0,764 $P < 0,05$, and reliability score was 0,906. While the Instrument of coping ability scale was developed also from a previous study with 37 Questions and the result of validity score was 0,337 s/d 0,683 $P < 0,05$ $P < 0,05$, and reliability score was 0,906 (Sijangga, 2010).

This study using a different test to determine the difference before and after treatment and the difference in the mean of each measurement on the anxiety variable, and Coping ability was measured at the beginning, four weeks after the intervention, and during the delivery. The analyzed data used the

repeated measured ANOVA test with Post Hoc LSD. Ethical Clearance obtained from the Bioethics Commission of the Faculty of Medicine, Sultan Agung Islamic University Semarang number 510 / VIII / 2019 / Bioethics Commission.

3 RESULT

The results of the different tests before the intervention on the level of anxiety, and the ability to cope during childbirth before treatment after four weeks and during labor to see the difference between the groups. The result pre-intervention between-group showed the p-value on all variables showing a p value > 0.05 so it was concluded that there was no difference in the initial intervention in the two groups.

3.1 Proving the Effect of Maternity Classes and Coping Skills on the Anxiety of Pregnant Women during Childbirth

The results are shown in Table 1 that the experimental group that received standard classes plus coping skills experienced a sharper decrease in the mean of anxiety score. The different test was carried out between the two groups based on the average change of each group in three measurements, namely measurement 1 before treatment, measurement 2 was carried out at week 4 after treatment and measurement 3 was carried out at delivery using the Repeated ANOVA test with post hoc LSD. The results of different tests can be concluded that the class of pregnant women plus coping skills can reduce the anxiety score of pregnant women. The intervention groups at the second measurement had an anxiety score of 0.896 which was lower than pregnant women who were not given treatment/control but the difference was not significant ($p = 0.502$). It can be concluded that the class of pregnant women plus coping skills can reduce more the anxiety score of pregnant women than control groups. While the score of anxiety at the third measurement during labor was lower as much as 0.563 ($p = 0.683$) than the control group. It also can be concluded that antenatal classes plus coping skill education more reduced anxiety levels during labor than control groups that were only given antenatal classes even not significant.

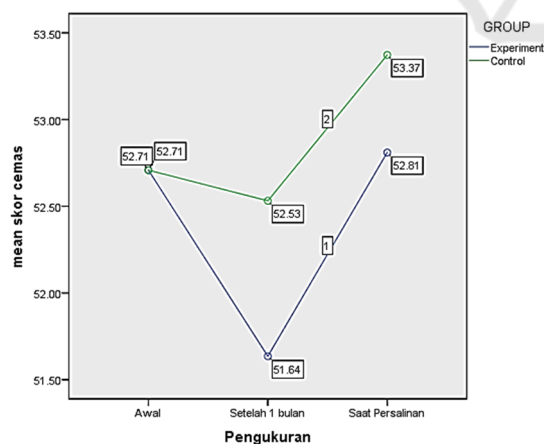
Furthermore, Figure 1 showed that the experimental group, the different test of Anxiety scores before and after intervention on the fourth weeks after the intervention and the third

measurement at the time of delivery with the Repeated measured Anova showed the mean score of Anxiety before (52.71) and after the second measurement (51.64) and the third measurement at delivery (52.81) after the intervention. In the graphic image, the anxiety score shows a decrease in the 2nd measurement but at the time of delivery, it has increased. In contrast in the control group the mean score of Anxiety was before (52.71) and after the second measurement (51.53) and the third measurement at delivery (53.37). The graphic showed that the intervention group had a trend of lower anxiety levels at four weeks after intervention and birth than the control groups.

Table 1: Differences in anxiety scores before and after intervention by a group.

Group	Anxiety	Anxiety	P.	Anxiety	P.
	Pre	Four weeks		At labor	
	mean ± SD	mean ± SD		mean ± SD	
Coping Classes	53.23 ± 7,45	51.82 ± 7.66		52,93 ± 7,82	0,327
Standard Classes	52.18± 9,86	52.35 ± 8.04		53,25 ± 4,62	0,630
Coping Classes		-0.896	0.502	-0.563	0.683

pre vs post: Repeated Measured Anova, post hoc LSD



Covariates appearing in the model are evaluated at the following values: cemas1_ = 52.7083

Figure 1: Anxiety score chart before and after intervention in the experimental group (n=60) and the control group (n=60).

3.2 Proving the Influence of Maternity Classes and Coping Skills on the Coping Abilities of Pregnant Women and Childbirth

The results are shown in Table 2 that the experimental group that received standard classes plus coping skills experienced a sharper increase in the mean of coping ability score. The different test was carried out between the two groups based on the average change of each group in three measurements, namely measurement 1 before treatment, measurement 2 was carried out at week 4 after treatment and measurement 3 was carried out at delivery using the Repeated ANOVA test with post hoc LSD. The results of different tests can be concluded that the class of pregnant women plus coping skills can increase the coping ability score of pregnant women. The intervention groups at the second measurement had a coping ability score of 1.740 which was higher than pregnant women who were not given treatment/control but the difference was not significant (p=0.284). It can be concluded that the class of pregnant women plus coping skills can increase more the coping ability score of pregnant women than control groups. While the score of coping ability at the third measurement during labor was higher as much as 3.942 (p = 0.030) than the control group. It also can be concluded that antenatal classes plus coping skill education more reduced anxiety levels during labor than control groups that were only given antenatal classes significantly during labor. Interestingly the result of coping ability at the third measurement of control groups during labor showed a decrease significantly during labor while the control group in contrast showed an increase coping ability during labor even it was not significant.

Furthermore, The Changes in coping scores from before the intervention in the first week to after the intervention in the fourth week as well as changes in the average coping scores at delivery are shown in Figure 2. Figure 2 showed that the experimental group, the different test of Anxiety scores before and after intervention on the fourth weeks after the intervention and the third measurement at the time of delivery with the Repeated measured Anova showed the mean score of coping ability before (117.78) and after the second measurement (118.80) and the third measurement at delivery (118.78) after the intervention. It can be concluded from the graphic image; the coping ability score shows an increase in the 2nd measurement sharply but at the time of delivery showed a slight decrease. In contrast in the control group the mean score of coping ability showed

before antenatal education was (117.78) and after the second measurement was decreased slightly (117.08) and the third measurement at delivery showed the coping ability was a decrease sharply (114.84). it can be concluded from the graphic that the intervention group had a trend increase of coping level at four weeks after intervention and a slight decrease of coping ability at birth than the control groups.

Table 2: Differences in Coping Scores before and after intervention by a group.

	Coping ability Pre	Coping Ability Four weeks	P.	Coping Ability At labor	P.
	mean ± SD	mean ± SD		mean ± SD	
Coping Classes	116.17 ± 9.46	118.00 ± 9.71		118.02 ± 9.46	0.178
Standard Classes	119.38 ± 10.16	117.87 ± 10.26		115.55 ± 11.62	0.045
Coping Classes		1,740	0.284	3,942	0.030

pre vs post: Repeated Measured Anova, post hoc LSD

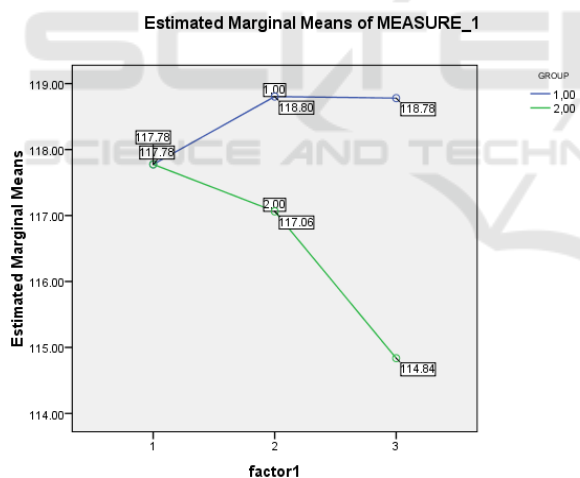


Figure 2: Coping score chart before and after intervention in experimental group (n=60) and control group (n=60).

4 DISCUSSION

4.1 Proving the Effect of Maternity Classes and Coping Skills on the Anxiety of Pregnant Women during Childbirth

The results of different tests can be concluded that the

class of pregnant women plus coping skills can reduce the anxiety score of pregnant women (0.896)which was lower than pregnant women who were not given treatment/control but the difference was not significant (p=0.502). furthermore, the score of anxiety level during labor was lower as much as 0.563 (p = 0.683) than the control group.

Anxiety is a feeling of worry as if something bad will happen and feeling uncomfortable as if there is a threat. The more pregnancy the mother will feel more anxious. Maternal anxiety is felt to increase due to increased discomfort in pregnancy and also the approaching labor process. A mother may feel fear of the pain and physical danger that will arise at the time of delivery.(H. Keliat et al., 2011) Anxiety and stress during pregnancy are often overlooked when it is important to pay attention. Midwives should recognize anxiety and overcome it by providing information and explanations about anxiety during pregnancy and at the time of birth by providing antenatal classes plus coping skill classes. The study showed that anxiety during pregnancy and at birth can influence the outcome of the health of the mother and fetus and also the outcome of birth and after birth during the postpartum period.(Blackmore et al., 2016) increase anxiety during pregnancy also has a risk to have a preterm birth.(Kartal & Oskay, 2017) It can be also explained as a result of anxiety and fear, many mothers experience more severe pain commonly referred to as fear-tension-pain that influences the outcome of birth. Fear causes anxiety so that muscles become stiff and cause pain. (Sartika & Susilawati, 2021) So that emotional support is needed in pregnancy and facing childbirth which can be provided not only antenatal classes but also by providing coping skill classes. Furthermore, health care providers included midwives need to be sensitive about the adaptation of active approach styles in coping that are needed for pregnant women. The combination of antenatal classes and coping skill education provide more comprehensive information and trained skilled how pregnant women overcome the feeling of anxiety using problem-focused coping and emotional-focused coping. The method of problem-focused coping and emotional-focused coping was trained in the experimental group to provide the ability for mothers to overcome anxiety during pregnancy and also manage feeling anxiety facing labor and during labor. It is effectively that manage anxiety could provide mothers cope better with uncomforted feelings during pregnancy and at birth.

Pregnant women express anxiety during their pregnancy until the delivery process they will face

and it causes stressors. The results showed that the experimental group who received antenatal classes and coping skill classes experienced a sharper decrease in the mean anxiety score on the 2nd measurement after 4 weeks compared with the control group who received only standard antenatal classes. Thus the results of the study are consistent that the individual response to stressors in the form of anxiety and times of anxiety is determined by coping, namely oriented and intra-physical efforts to manage the environment and internal needs as well as conflicts regarding this matter. Furthermore, coping efforts can affect birth outcomes by serving to minimize or prevent negative emotional, behavioral, cognitive, and physiological responses to stress. As a result, the ability to select and implement appropriate coping responses can serve as an endurance resource that buffers pregnant women and their children from the potentially harmful effects of prenatal anxiety and stress exposure.(Guardino CM, 2015) Thus can be concluded that coping skill education was useful to provide pregnant women the ability to cope with anxiety during facing labor by modification and doing such positive behavior to minimize anxiety.

4.2 Proving the Influence of Maternity Classes and Coping Skills on the Coping Abilities of Pregnant Women and Childbirth

The results showed in Table 2 that the experimental group who received coping classes experienced a sharper increase in the average coping ability after the fourth week and the coping ability of the intervention group at birth was higher than the control group and the difference was significant.

Coping is a process in which individuals try to find out the distance that exists between demands (both demands that come from individuals and those from the environment) and the resources they use in dealing with situations that arise stress full.(Lazarus RS, 1984; Taylor, 2015) Coping strategy emphasizes the effort or a process, where the individual tries to resolve or deal with an event or events that are considered stressful. The trick is to change his cognition to control, tolerate, reduce, or minimize pressure situations, to find a sense of security.(Aldwin, 2007) the study showed that coping skill education is more effective to train mothers' ability to do coping during pregnancy and labor. The coping ability is very important, based on the study ability to cope with anxiety and stress during pregnancy and labor was effective to overcome the worst birth outcome(Kartal & Oskay,

2017; Sharon-David & Tenenbaum, 2017). Furthermore, coping skill ability that was treated during pregnancy integrated standard antenatal classes was beneficial for mother not only has skills pregnancy, birth and baby and postpartum care but also ability to develop the coping ability to modified some skill facing a delivery. The other research also has proved that there was a high correlation between coping ability with the stress of pregnant women. The study also stated that better coping ability during labor would result from a better outcome of pregnancy and birth. (Sarani et al., 2016) It can be concluded that mother who received antenatal classes with coping skill classes has more skill ability to cope better during pregnancy and facing labor and during labor than mother only provided antenatal classes. A previous study proved that better coping will decrease stress during pregnancy and better outcomes of birth and postpartum.(Goletzke et al., 2017) Coping ability was found very useful trained during pregnancy as the study found that women who have coping ability better will have larger scores in self-efficacy and carried out more coping behavior strategies during labor. Pregnant women also had a more positive evaluation of the childbirth experience and showed significant gains in satisfaction after childbirth. It was also needed assessment the level of confidence women have in their ability to cope with the birth and ability to have a vaginal birth. Furthermore, the study also said that there were also need health care proved should provide coping skill education to mothers so that it can increase satisfaction with the childbirth experience by helping to enhance self-efficacy and coping in pregnant women (Report, 2017).

5 CONCLUSION

Based on the study result it can be concluded that standard classes plus coping skills have a better impact to decrease anxiety levels during pregnancy and birth and improve coping ability during pregnancy and birth.

The provision of midwifery care uses continuity of care so that it can monitor and optimize preventive and promotive efforts. In addition, it can provide holistic and comprehensive care including bio, psycho, social, and spiritual. For further researchers, it is hoped that they can develop research on psychological well-being in postpartum mothers and child development.

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