

# The Effectiveness of Akuyoga to Reduce Mothers' Anxiety Level in Primigravidae Trimester III

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**Abstract:** *Anxiety is a problem often encountered in primigravidae period and if this matter is not addressed promptly it can lead to disturbances to the mother and the baby, one of the results is premature birth or babies born with low birth weight (LBW). Akuyoga is one effort in overcoming anxiety in pregnancy. The objective of this study was to determine the effectiveness of the akuyogamodel against primigravidae anxiety levels in the third trimester of pregnancy. The research design was pretest-posttest control group design. The population in this study was all primigravidaemothers in third trimester. The samples in this study were 30 respondents were divided into 2 groups. The experiment group consisted of 15 respondents and a control group consisted of 15 respondents. The sampling technique used in this research was purposive sampling technique. The research instrument used Hars scale. The data were processed using the Mann-Whitney U Test. The results showed that after given treatment, the anxiety level in the experiment group was reduced into mild anxiety level by 100% while in the control group the outcomes were 53.3% in majority were in moderate level. The result is statistically significant ( $p < 0.05$ ). Akuyoga treatment is very effective in lowering the level of anxiety in pregnancy. Expected health workers can apply akuyoga in pregnant women in order to live a healthy pregnancy.*

**Keywords:** effectiveness, akuyoga, anxiety, primigravidae, Trimester III

## 1. Introduction

Anxiety is a natural thing and is often experienced by some people, but if the anxiety experienced by pregnant women is no longer a natural thing (Kusmiati, 2008). Anxiety is a brief period of nervousness or fear one experiences when confronted with a difficult experience in life (Wangmuba, 2009). Pregnancy can be a source of anxiety stressor, especially for mothers who tend to be labile (Yesie Aprilia, 2011).

Based on the research, a pregnant woman who experience anxiety has higher risk of premature birth and lower birth weight babies (LBW), even miscarriage (Yesie Aprilia, 2011). During pregnancy, perceived stress continuously weakens the immune system of expectant mothers, including the unborn fetus. There is a direct relationship between mother and baby, which is connected through the umbilical cord from the food to the uterus, because the fetus will feel all the hormonal activities felt by the mother (Sindhu, 2009).

Based on Health and Research Development Agency in 2010, there were 11 births with low birth weight, 1% per 357.469 inhabitants of 3.24972 million births per year in Indonesia. While in East Java, there were 10.1% of infants with low birth weight (Health and Research Development Agency, Ministry of Health, Riskesdas, 2010). The data from Kediri City Health Department in 2011 there were 98 babies born with low birth weight that will impact on increasing mortality and morbidity in neonatal period. (Kediri City Health Office, 2012).

According to Walker Karra, a Doctor at the Institute of Transpersonal Psychology or Sofia University stated that there are more pregnant women with depression than pregnant women with diabetes or high blood pressure. Pregnant women with depression reach the number of 20% while the number of pregnant women with diabetes and high blood each is 2-10% and 2-3% (Karra Walker, 2012).

Research conducted by Kusumain Jakartaprovential clinic through a list of questions to measure the scale of distress, it is known that more than 60% of pregnant women experience anxiety and less than 10% is relatively calm (Wirawati, 2005).

A research conducted by Trianing in Jember, East Java showed that out of 26 pregnant women, 14 (53.8%) of them experience anxiety, while 12 (47.2%) of them do not experience anxiety during pregnancy (Trianing, 2005).

We must keep in mind that every prospective mother's heartbeat can certainly be felt by the fetus. Therefore, if the mothers often experience anxiety, fetal heart rate will increase. The increasingly hard mother's heartbeat can affect fetal movement. Consequently, the fetus will also be more active (Yesie Aprilia, 2011). Approximately, there are 70% of pregnant women who come for medical treatment suffering from diseases caused or triggered by stress. Fear and pain cause stress and induces adrenaline. This is resulted in narrowing blood vessels and reducing blood flow that brings oxygen and nutrients to the baby through the placenta, causing low birth weight (Yesie Aprilia, 2011).

Increasing fetal heartbeat and trigger stress hormones can affect the condition of the mother and result in some conditions such as sleep disturbances, lack of appetite, feelings of anxiety and others. As in the third trimester, anxiety will appear before delivery. Questions and worries whether to give birth normally, how to push, whether something will happen during delivery, or if the baby is born safely, will be more frequent in the minds of pregnant women. The pain at the time of delivery is always the first topic to talk about by women (Hasuki, 2007). With her pregnancy getting older, the expectant mothers' attention and thoughts began to fixate on something that is considered as the climax, so the anxiety and fear experienced by pregnant women will intensify just before delivery (Aprianawati, 2007).

Now it is already realized that disease and obstetric complications are not only caused by organic disorders. Some are caused or aggravated by psychological disorders such as hyperemesis gravidarum, abortion, pre-eclampsy and eclampsy, and prolonged labor. Considering that anxiety has bad effects in pregnancy, the necessary precautions and treatment is needed if necessary so as not to cause complications and diseases in pregnancy (Yesie Aprilia, 2011)

To break the cycle of anxiety, yoga gymnastics can be used as an alternative therapy that can be administered to pregnant women. Yoga during pregnancy helps women to focus on labor and better preparing for themselves, reduce anxiety, increase baby weight, reduce premature birth and intrauterine growth retardation also inhibits (Mona Khalajzadeh, 2012)

Anxiety is often caused by ignorance of something or trauma because of previous unpleasant experience. Toward the last days before giving birth, the mothers often hit by worries. When someone is anxious, the mind will bring a lot of images that will aggravate anxiety. Practicing yoga can make physical and mental condition become stronger, firm but supple, and flexible to adapt to a variety of unpleasant situations (Sindhu, 2009)

In yoga there is a buzzing or brahmari breathing techniques and meditation techniques to master the mind and overcome anxiety. Yoga can also improve the bond with the baby and to eliminate anxiety. Yoga exercises can loosen the attachment of worldly experiences and divert it toward the "Observer". Awareness of the "Observer" that will slow

down the activity of the mind, calm the heart and peace of mind so that we became aware of what we are experiencing today (Sindhu, 2009)

Based on the preliminary study, there were 16 primigravida in trimester III who experience anxiety in facing labor. Based on the above background, the researchers are interested in conducting a study entitled "The Effectiveness of Akuyoga Model to Reduce Anxiety Levels in primigravidae Trimester III".

**General Objective**

To determine the effectiveness of Akuyoga model to reduce anxiety levels in primigravidae Trimester III

**Specific Objective**

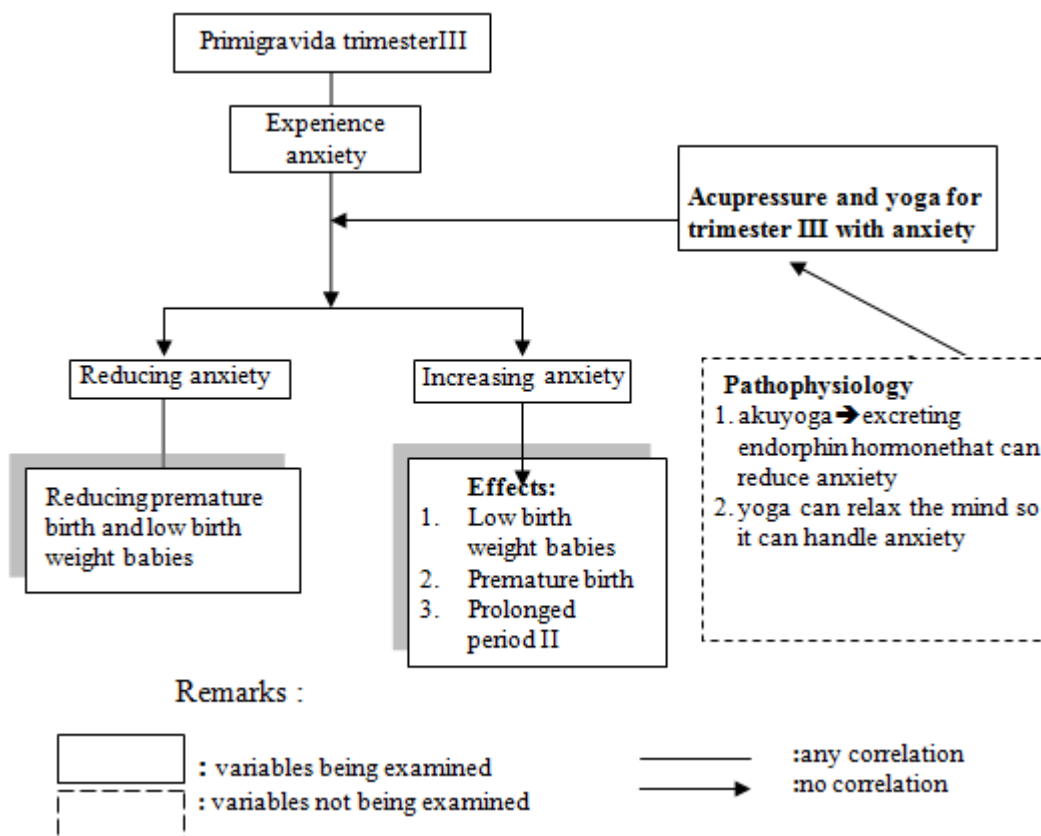
In particular, this study aims to:

- a) Analyze the differences in levels of anxiety before and after akuyoga in the experiment and control group at week 1,2,3,4
- b) Analyze the differences between the level of anxiety for those who practice akuyoga compared to those who do not practice it

**Hypothesis**

- 1) There is a difference in levels of anxiety before and after akuyoga in the experiment group and the control group
- 2) Akuyoga Model is effective to decrease anxiety level in primigravidae Trimester III

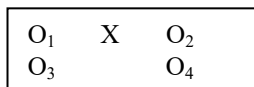
**2. Framework**



**Figure 1: Framework**

### 3. Method and Design

This study used a pretest-posttest control group design. In this design, there were pregnant women who were given akuyoga treatment and not given akuyoga in trimester III. Both groups were preceded by a pre test and after the treatment, a post test was conducted.



Remarks:

Research Variable and Sample

The independent variable is akuyoga.

The dependent variable is mothers on primigravidae trimester III and experiencing anxiety.

Classification variables

1. Mothers on primigravidae trimester III and experiencing anxiety.
2. in healthy condition

A sample of 30 respondents consisting of 15 respondents in control group and 15 respondents in experiment group

### 4. Result and Discussion

#### Result

Anxiety level in primigravidae trimester III in the first - fourth week

**Table 3.1:** Analysis of anxiety levels in in primigravidae trimester III in the first week

First week	Group	Before				After				P
		Mild		Moderate		Mild		Moderate		
		n	%	n	%	n	%	n	%	
	1. Treatment	2	13.3	13	86.7	4	26.7	11	73.3	0.142
	2. Control	1	6.7	14	93.3	1	6.7	14	93.3	

Table 3.1 shows that the results of the pretest on week 1 indicate the levels of anxiety on two groups before treatment is mostly in moderate state. After given the treatment, the anxiety level reduced to mild anxiety on the treatment group with 26.7%, while in the control group it becomes 6.7%.

Although the results were not statistically significant (p = 0.142) but after being given treatment it can be clinically proportioned that the anxiety level on treatment group is reduced more than the control group by 20% (26.7% - 6.7%).

**Table 3.2:** Analysis of anxiety levels in primigravidae trimester III in the second week

Second week	Group	Before				After				P
		Mild		Moderate		Mild		Moderate		
		N	%	n	%	N	%	n	%	
	1. Experiment	1	6.7	14	93.3	13	86.7	2	13.3	<0.001
	2. Control	1	6.7	14	93.3	0	0	15	100	

The result of pretest on the 2<sup>nd</sup> week shows that the anxiety levels of both groups before treatment is majority in moderate level. After given the treatment, the level of anxiety becomes lower by 86.7%. Meanwhile, respondents on the control group that reach mild anxiety level is 0%.

Statistically the results is significant (P < 0.05), it means that after given the treatment it is clinically proportioned that the experiment group has mild anxiety level greater than the control group by 86.7% (86.7% - 0%).

**Table 3.3:** Analysis of anxiety levels in primigravidae III on the third week

Third week	Group	Before				After				P
		Mild		Moderate		Mild		Moderate		
		n	%	n	%	n	%	n	%	
	1. Experiment	3	20	12	80	15	100	0	0	<0.001
	2. Control	0	0	15	100	0	0	15	100	

The result of pretest on 3<sup>rd</sup> week shows that anxiety levels of both groups before treatment is mostly in moderate level. After the treatment, the anxiety level on the experiment group reduced to 100%. Meanwhile, the anxiety level mild anxiety level in the control group became 0%. The result is

statistically significant (P < 0.05) which means that after the treatment it is clinically proportioned that the experiment group with mild anxiety level is greater than the control group that was not given akuyoga by 100% (100% - 0%).

**Table 3.4:** Analysis of anxiety levels in primigravidae III on the fourth week

Fourth week	Group	Before						After						p
		Mild		Moderate		Severe		Mild		Moderate		Severe		
		n	%	n	%	n	%	n	%	n	%	n	%	
		Experiment	9	60	6	40	0	0	15	100	0	0	0	
Control	0	0	6	40	9	60	0	0	8	53.3	7	46.7		

The result of pretest on the 4th week shows that the anxiety level of the experiment group is in mild level in majority and the control group has severe level. After the treatment, the level of anxiety is reduced by 100% while the control group who was not treated with akuyoga reached anxiety level to medium level with 53.3%. The result is significantly significant ( $p < 0.05$ ).

## 5. Discussion

### **The level of anxiety before the treatment in the group treated with akuyoga and with no akuyoga**

It has been described that the results of pretest in the first week show that the levels of anxiety of both groups before treatment is majority in moderate level. Pretest result on week 2 show that anxiety levels of both groups before treatment is majority in moderate level. Pretest results on week 3 show that anxiety levels of both groups before treatment is majority in moderate level. Pretest results on week 4 shows that anxiety level of group treated with akuyoga before treatment is majority in moderate level, meanwhile those who are not given treatment are in severe level.

The above data explains that the 4-week observation during the third trimester of primigravida treated with akuyoga and not treated with akuyoga shows anxiety levels varies from mild anxiety level to severe anxiety. The greater the pregnancy appears to increase the risk of anxiety in pregnant women. This is consistent with the concept that in the third trimester changes happen, including having a strange feeling, feeling bad, and becoming more introverted. Fear of delivery, feeling that pregnancy will be a burden for her body (Bahiyatun, 2010). Anxiety and worry on trimester III, due to her pregnancy that reach seven-month-old and approaching delivery, where the mother begins to imagine a stressful labor, the pain endured, even death during childbirth (Bahiyatun, 2010). She also feels anxious whether her baby will be born deformed, in addition to hormonal changes in the body, the growing fetus in the womb that lead to maternal fatigue, discomfort and lack of rest (Uripmi, 2011).

Mental readiness to face labor is influenced by the support of her husband and family, income level, education level, frequency of antenatal care, parity and age. The majority of respondents graduated from high school, which also affects the mother's level of knowledge about how to deal with pregnancy and childbirth. In addition, most of them are housewives. These conditions greatly contribute to a mother's ability to find solutions to deal with a healthy pregnancy as well as efforts to increase their knowledge in the face of labor.

The research conducted by Janet A DiPietro (July 2006) has proven that mild or moderate stress during pregnancy has been associated with the development of children, but it needs to be underlined that Janet's study was performed on pregnant women with financially stable educational background and condition and clinically undiagnosed with psychological problems. Factors that affect the physiology of pregnancy is maternal maturity and readiness for the

birth. Other factors that have contributed positively or negatively is the psychological health of mothers and infants and gestational age. According to Lewellin, mothers are more prone to depression during primigravidae period and when they are lack of social support and family. Education is an important factor to determine the quality of the community. The level of education of a person is influential in responding to information coming from the outside. Those who have higher education will provide rational responses than those with lower education. In this case, women with better education level will more of their rationale dealing with physiological and psychological changes during pregnancy (Bobak, Jansen, Lowderwek 2004). The support of the husband is also a great contributor in determining the health of the mother that can reduce anxiety and restore the confidence of mothers in undergoing the process of pregnancy. So that psychological disorders that arise during the process of pregnancy can be avoided, or not getting more severe (Kusmiati, 2009).

### **Anxiety levels after treatment in the group given akuyoga and the group with no akuyoga**

The results showed that after akuyoga treatment, those who have mild anxiety level reached the percentage of 26.7%, while those who are not given akuyoga reached to 6.7%. At week 2 after the treatment, it reached to 86.7%. while those with no treatment reached to 0%. At week 3 after the treatment, those with mild anxiety reached the percentage of 100%. while those with no treatment reached the percentage of 0%. At week 4 after the treatment, those with mild anxiety level reached the percentage of 100% while those with no treatment reached the percentage of 53.3%.

Akuyoga which is performed every week in the third trimester of primigravida show positive results that the majority of respondents finally only have mild anxiety. Those who are not treated with akuyoga experience increasing level of anxiety from moderate to severe anxiety. This is closely related to increasing age of pregnancy which may be linked to anxiety in facing labor.

When anxiety in pregnant women is not treated seriously, it will have impact and influence on her physical and psychological condition, both in the mother and fetus. Mothers who experience anxiety or stress, will affect the hypothalamus to stimulate the endocrine glands that regulate the pituitary gland (Suliswati, 2005). This reaction causes increasing production of hormones that affect most organs, such as heart palpitations, pulse and rapid breathing, excessive sweating, etc. (Dadang Hawari, 2006). In addition, it will also result in vasoconstriction which causes disruption of blood flow to the uterus, so the oxygen flow received by the fetus will be interrupted (Suliswati, 2005). Disorders due to anxiety experienced by mothers will cause emergencies for both the mother and the fetus in the delivery process, which can lead to the release of stress hormones, among others are Adreno Cortico Tropin hormone (ACTH), cortisol, catecholamines,  $\beta$ -Endorphin, Growth Hormone (GH), prolactin and Lutenizing Hormone (LH) / follicle Stimulating Hormone (FSH). Besides, with the increasing plasma cortisol, it will be resulted in lowering maternal and fetal immune response. These conditions can lead to the death of



the mother and fetus. If we ignore this condition, the mortality and morbidity in pregnant women may increase.

A research was conducted by Polis and Kuo (2015) on 25 pregnant women with gestational age of 35 weeks and given a yoga class for one month. A pre and post test was conducted on the mother's heartbeat, temperature, and fetal heart rate. There were 26 postures of mechanical movement of yoga conducted there. The result of the study showed that there was no yoga participants reported a decrease in fetal movement, contractions, rupture of the membranes or bleeding within the last 24 hours after yoga. The conclusion is that those 26 yoga postures made no change in adverse maternal and the fetal heart rate were not affected.

Akuyogacan be considered as one alternative in helping pregnant mothers to reduce anxiety during pregnancy so that she can face the pregnancy and childbirth well and have healthy babies.

### **Akuyoga Effectiveness against Anxiety Levels in Primigravidae Trimester III**

The research results on the first week were not statistically significant ( $p = 0.142$ ) but after the treatment, the proportion of pregnant women on trimester III whose level of anxiety were reduced 20% higher than those with no treatment (26.7% - 6.7%). Week 2 showed statistically significant result ( $p < 0.05$ ). Week 3 also showed statistically significant result ( $p < 0.05$ ). Week 4 also showed statistically significant result ( $p < 0.05$ ).

The above results explain that akuyoga which was conducted for 4 weeks is proven to reduce the level of anxiety in pregnant women. These results are consistent with research conducted by Newham et al (2014) in pregnant women who were given yoga treatment for 8 weeks by assessing cortisol levels before and after yoga exercise. It can be concluded that antenatal yoga is useful for reducing anxiety in facing labor and prevent depression.

Every pregnant woman has different intensity of anxiety. Anxiety is the emotional response without a specific object that is subjectively experienced and communicated interpersonally. Anxiety is confusion, concerns something that happened with no apparent cause and is associated with feelings of uncertainty and helplessness (Suliswati 2005, h.108). Anxiety can be caused due to two factors, namely between pleasure and pain that is being felt. One form is a state of anxiety in which people are always waiting for something bad that might happen. As a result, the mother will always be in a state of anxiety for fear of the consequences that would probably happen in an uncertain situation. Feeling afraid or uneasy, which causes are unidentified (Rohmah 2010, p. 51).

Anxiety itself will cause a pregnant woman to become tense and uncomfortable, even severe anxiety will damage the health of the mother and fetus (Saifuddin 2009, h.329). Some of the factors associated with maternal anxiety (primigravidae), among others are: a. The internal factors, such as 1) Age. The safest age range of pregnancy is about 20-35 years of age. 2) Level of education. Education affects

the mother's level of anxiety due to the lack of information of various media such as magazines and so forth, about the pregnancy either from the nearest source or family. Education helps pregnant women and their families controlling the source of stress and help to select adaptive coping. 3) Monthly income. 4) Work. Activities undertaken continuously in order to meet daily needs, both primary and secondary needs. 5) Husband attitude. Attitude is a mental and neural state of readiness which is maintained through experience that provides dynamic influence or directed against the individual response to all objects and situations related to it. The attitude of husbands or significant others can provide physical and moral encouragement for pregnancy or labor, so the mother will feel more at peace. b. External factors, 1) environmental factors. All conditions that exist around human beings and can affect the development and behavior of individuals or groups. 2) Socio-cultural. Cultural systems that exist in society can influence attitude in receiving the information.

A research was conducted by Kusaka et al (2016) to evaluate the effects of yoga in reducing stress during pregnancy. The research was conducted on 60 primipara without complications in Japanese hospitals to provide treatment twice in a month (yoga class) and to practice yoga at home equipped with a DVD and performed three times a week from 20 weeks gestation until delivery. Salivary cortisol and alpha amylase concentrations were measured before and after yoga in the first time (27-32 weeks of pregnancy) and the second time (34-37 weeks of pregnancy). The data was then tested with t test and Wilcoxon test. The average concentration of salivary cortisol that decreases after yoga treatment is significant ( $p = 0.0001$ ) and alpha amylase concentration is also decreased significantly ( $p = 0.0006$ ). Scores on negative mood dimension decreased significantly. Scores of vigor for the positive dimensions of mood improved significantly. It can be concluded that this study shows the effects of stress reduction of yoga during pregnancy.

A research conducted by Cramer et al (2016) showed that yoga which was done in 12 months is beneficial for public health or to prevent the disease (78.4%), to increase energy (66.1%), or to enhance immune function (49.7%), back pain (19.7%), stress (6.4%), and arthritis (6.4%).

Primigravidae often has distracting thoughts, as the development of anxiety reaction. Therefore, fears usually appear on primigravidae who has no experience of maternity. Pregnant women become irritable, restless, unable to concentrate, hesitant, and even has possibility to run away from the realities of life. In the third trimester (28-40 weeks), anxiety before delivery will appear. At the age of seven months and above, the anxiety level of pregnant women become more acute and intensive. In addition, this trimester is a time at high risk of preterm birth that causes high anxiety in pregnant women (Wulandari, 2006). Experiencing birth for the first time gives mingled feeling between happiness and concerns about what would be experienced during childbirth. Anxiety arises because of fear due to labor. This situation raises the drastic changes, not just physical and psychological change (Amalia, 2009). Pregnant women who experience anxiety during pregnancy

will have increasing risk of emotional imbalances after childbirth. According to Sundeen (2008), there are various factors related to anxiety levels on primigravidae, some of which are age, education level, occupation and maternal parity. Meanwhile, according to Magrifoh (2011) factors associated with anxiety are knowledge, psychology, economics, experience, family and husband support. Pregnant women with less than 20 years of age or over 35 years is the age of high risk pregnancy because fetus abnormalities or disorders may happen, which can cause anxiety in pregnant women.

A research carried out by Field et al (2012) was conducted on 84 pregnant women who were divided into 3 groups, namely: experiment group, massages group and group with no akuyoga. Yoga was done twice a week for 12 weeks for 20 minutes. The results showed that yoga and massage therapy reduce anxiety, prenatal depression and infant weight was better than those with noakuyoga.

Another research by Bershadsky et al (2014) on 51 pregnant women with yoga conducted during pregnancy with assessment of salivary cortisol levels. The results showed levels of salivary cortisol at yoga groups was lower than the third trimester pregnant women with noakuyoga ( $p < 0.001$ ), the incidence of postpartum decreased on hatta yoga group ( $< 0.05$ ). The conclusion was that hatta yoga can improve mood, reduce stress and reduce the symptoms of postpartum depression.

On the other hand, the psychological changes in the mother's first trimester were estimated at 80%, it increased the nature of a sense of disappointment, rejection, anxiety and sadness. In the second trimester, the psychological condition of the mother seemed to be more calm and begin to adapt, and at 3rd trimester, the changes seemed to be more complex and increased again compared to the previous trimester, due to the growing condition of pregnancy (Janiwarty & Pieter, 2012). Along with gestation, both emotional and physical condition of the mother will change, and this will continue up to the time of delivery. With the approaching time of delivery, especially the first delivery, it is reasonable that feelings of anxiety or fear appear (Marmi, 2011). Anxiety is a part of our emotional responses, which is associated with feelings of uncertainty and helplessness. This emotional state does not have a specific object. It is subjectively experienced and interpersonal. An individual who experience anxiety can directly express anxiety through physiological and behavioral responses, and indirectly develop it through a defense mechanism against anxiety called coping. Based on this classification this coping is divided into two, namely adaptive mechanism that supports the function, and maladaptive mechanism that inhibits the function (Stuart, 2006). Pregnant women who do not have preparation for childbirth will be more anxious and express their fear in silence to tears. Even though birth is a normal physiological phenomenon, in fact labor always causes bleeding, extreme pain and even death that can cause fear either the mother or her baby (Janiwarty & Pieter, 2012).

A research conducted by Moradi et al (2014) at 150 primipara that were divided into 3 groups: acupressure group on the meridian points GB-21 and acupressure group of

acupressure on the meridian points SP 6 and pregnant women on 3<sup>rd</sup> trimester with noakuyoga. Acupressure was done for 20 minutes. Spielberger questionnaire was used to assess anxiety before and one hour after treatment. The results showed no difference in anxiety in all three groups before treatment ( $P > 0.05$ ) but after treatment the anxiety decreased in the treatment group ( $P < 0.001$ ).

A research conducted by Jiang et al (2015) concluded that yoga can be safely performed on pregnant women who experience depression or back pain. Yoga is more effective than walking or standard prenatal exercise. Yoga is a safe and effective treatment during pregnancy.

A research conducted by Thirthali et al (2013) in 54 patients who were divided into 2 groups, one performing yoga and another receiving antidepressants. The result showed yoga affects the hypothalamus to produce anti-stress (reduce cortisol) that can reduce depression.

All of the descriptions above confirm that Akuyoga is very helpful for pregnant women to deal with the anxiety that occurs during pregnancy and can reduce postpartum depression so as to improve the welfare of the mother and the baby.

## 6. Conclusion and Recommendation

### Conclusion

- 1) The level of anxiety in the third trimester primigravidae with akuyoga and with noakuyoga before akuyoga treatment belongs to moderate level.
- 2) The level of anxiety in the third trimester primigravidae with akuyoga after akuyoga treatment mostly in mild level while those who are not treated with akuyoga mostly belong to moderate level.
- 3) Effective Akuyoga can decrease anxiety level of primigravidae in the third trimester.

### Recommendation

- 1) The results of this study can be used as input for a study that akuyoga method is very effective in reducing anxiety during pregnancy so as to assist pregnant mothers for pregnancy, childbirth and make the baby healthy.
- 2) The results of this study can be used to further develop the technique of hatta yoga and acupressure to provide care pregnancies with various yoga postures and meridians for safe pregnancy based on evidence based in order to improve the quality of life for pregnant women so as to achieve prosperity maximum for the mother and the babies.

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