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# KARUNGUT MUSIC REDUCES ANXIETY OF ADOLESCENT PREGNANT MOTHER

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**ABSTRACT**

***Background:*** *Adolescent pregnancy is being a problem in Indonesia. Adolescent pregnancy can bring problem not only to the baby's health but also the mother's health as well. It can cause problem in society too. The pressure from family and society towards adolescent who got pregnant, especially if they get pregnant without marriage can lead the mother to face anxiety during the pregnancy. The anxiety during pregnancy can bring negative impact to the baby and mother. This study aims to determine the effect of Karungut music to the anxiety level among pregnant adolescent in Kapuas Regency, Indonesia.*
***Methods:*** *This study was an analytical study with a quasi-experimental. Totally 60 respondents were recruited in this study used simple random sampling. 30 respondents were chosen to be experimental group meanwhile the rest as control group. The data was analyzed in univariate and bivariate analysis. binary logistic regression was used to analyze in multivariate level.*
***Results:*** *Majority of the respondents in this study were did the Antenatal Care regularly (55%), had high motivation for pregnant (51.7%), got families support (71.7%) but not from the health workers (83.3%). The multivariate analysis showed that heard Karungut music can reduce the anxiety level among pregnant adolescent (OR= 3.33) after controlling other variables.*
***Conclusion:*** *Listening Karungut music during pregnancy can reduce the anxiety among pregnant woman. It can be considered as an alternative way to improve the health status among pregnant adolescent by reducing one of risk factor that can affect to the pregnancy. Supporting from family and health workers also important during pregnancy to reduce the anxiety.*

***Keywords****: Anxious, Music Karungut, Pregnant Adolescent*

## BACKGROUND

Adolescent pregnancy is a life phenomenon that can make problems in reproductive health. A lot of Adolescent pregnancy occurs in low and middle-income countries, including Indonesia. Statistic in Indonesia present that the number of adolescents aged 15-19 years in 2010 is 20.9 million [1]. In 2012, the Age-Specific Fertility Rate (ASFR) occurs in 30 births per 1000 women aged 10-19 years [2]. Kalimantan Tengah Province became the highest adolescent pregnancy in Indonesia. Every 1000 adolescents, 77.92% among them been pregnant [3]. Kapuas is one of the district that contributes the highest Adolescent pregnancies [4]

Adolescent pregnancy has a negative impact on adolescent health, fetal health, social and economic. Adolescent pregnancy will have the risk of premature delivery, low birth weight, hemorragic, unsafe abortion until maternal and fetal mortality. Adolescents who are pregnant outside of marriage, feel

psychosocial effects such as mental tension and confusion about social roles in their community. She will receives a rejection. Besides that, pregnancy outside marriage in adolescents will affect anxiety, especially when the adolescents face birth [5]. Pregnancy can lead to drastic changes both physically and psychologically. The Woman, who are ready for their pregnancy, will have no problems about the changes, but for adolescents who are not ready to get pregnant, they will have more pressure on the psychological part.

Pregnant women with high levels of anxiety are have strong predictors for the onset of post-partum depression, in addition to low self-confidence and low social support [6]. In 650 low-risk pregnant women with a gestational age of 35-39 weeks' pregnancy showed 25% experienced high levels of fear for childbirth and this positively correlated with anxiety. Fear of childbirth is still part of a complex picture of women's emotional experiences during pregnancy. Antenatal care at 35 weeks' pregnancy as many as 24% experienced anxiety. First, second and third-trimester pregnant women, 54% experienced anxiety, and of 165 pregnant women, as many as 70% were anxious. 29% of pregnant women experienced symptoms of anxiety. Research conducted on pregnant women Third trimester primigravida as much as 33.93% experienced anxiety [7,8,9]. The anxiety of pregnant women increases with time when labor is getting closer.

Risk factors of anxiety in pregnant women are maternal characteristics, include education, age, employment status, reproductive factors which include unwanted pregnancy/ unplanned pregnancy, previous experience of pregnancy and childbirth, maternal health status, maternal relationship with a partner, and family support. Family support is a preventive intervention strategy that is the best for helping family members who experience problems that have an impact on anxiety aimed at increasing adequate family support [10]

Some alternative therapies that can overcome the anxiety of pregnant women are massage and energy therapy such as massage, acupressure, and therapeutic touch, healing touch, mind-body healing such as imagery, meditation/yoga, prayer, and biofeedback reflection. Music is an important part of human life and is one form of art that can relieve stress. Classical music therapy for pregnant women is known to be very beneficial, not only in pregnancy but also during labor. Music connects someone to the essence of self. Besides having unlimited strength, music has the power of calm and healing. Music can help the listener relax like a drugs to reduce pain and tension and relax the muscles. Melodious tones have the ability to cure mental or physical fatigue.

Karungut music is traditional music from Dayak Ngaju tribe usually used in traditional ceremonies (rituals), dance accompaniments, entertainment facilities, even as a means of communication. Karungut as part of regional music that needs to be introduced to its existence and function to people outside Dayak Ngaju tribe who generally do not know this art. Karungut's music in Kalimantan Tengah had functioned as emotional expression, communication facilities, entertainment facilities, educational facilities, economic facilities, and dance accompaniments. The form of presentation of Karungut's musical instruments is played together with a simple tool [11]

Adolescent pregnancy is mentally unprepared, increasing the risk for mother and child. Given that Adolescent pregnancies in Central Kalimantan are high and have potential to increase the incidence of complications, prevention measures need to be taken. One of effort that can be done is by reducing the anxiety experienced by adolescents during pregnancy through Karungut music as a means of communication, entertainment, and education.

## METHODS

This research is an analytical study with a quasi-experimental design with a nonequivalent pretest-posttest design with a control group with interventions in giving Karungut music to adolescent pregnant women. This study involved 60 adolescent pregnant (30 cases and 30 control) were selected from Pujon, Lamunti and Sei Hanyo Primary health center area of Kapuas Distric using a simple random sampling

technique. Inclusion criteria are adolescent pregnancy, which in primary health center area, third trimester of gestation, has mild or moderate anxiety, like a music, and willing to be a respondent. Exclusion criteria are moving to other health center area and have complication of their pregnancy. The data were collected by Questionnaire Zung Self-Rating Anxiety Scale (SAS/SRAS), contains 20 items where each question is rated 1-4 (1: never, 2: sometimes, 3: part time, 4: almost every time) there are 15 questions towards increasing anxiety and 5 questions towards decreasing anxiety [12]. The assessment range is 20-80, with groupings including: score 20-44 = mild anxiety, score 45-59 = moderate anxiety, score 60-80 = severe anxiety. The alpha crounbach validity test are 0.85 and reliability is 0.79. In data analysis, the descriptive statistics were presented through frequency and percentage for the categorical data. T-test was used to compare of two independent groups. The logistic regression was used to compare the means of more than two independent groups. This Research have ethical clearance from Ethical Committee of Health Polytechnic Palangka Raya in number 003B/IX/KE.PE/2018.

## RESULTS

This section comprises the results of the study to assest pretest and posttest. The women interviewed were aged between 14 and 19, with a mean age (± standard deviation) of 17.48 (1.172). Table 1 present the characteristic of respondents.

Table 1. Characteristics of Respondents

| Variable | Frequency | Percent (%) | Total |
|---|---|---|---|
| ANC history | | | |
| Regular | 33 | 55 | 55 |
| Irregular | 27 | 45 | 45 |
| ANC Frequency | | | |
| <4 times | 43 | 71.7 | 71.7 |
| ≥ 4 times | 17 | 28.3 | 28.3 |
| Pregnancy Complications | | | |
| Yes | 48 | 20 | 20 |
| No | 12 | 80 | 80 |
| Motivation | | | |
| Low | 29 | 48.3 | 48.3 |
| Height | 31 | 51.7 | 51.7 |
| Family support | | | |
| Not supportive | 17 | 28.3 | 28.3 |
| Supports | 43 | 71.7 | 71.7 |
| Health Worker Support | | | |
| Supports | 50 | 83.3 | 83.3 |
| Not supportive | 10 | 16.7 | 16.7 |

Table 1 shows that the majority of respondents (55%) Antenatal Care (ANC) regularly, with the highest ANC frequency (71.7%) <4 times, 20% of respondents experienced pregnancy complications, 51.7% of respondents had high motivation for pregnancy, 71.7% of families support respondents and 83.3% do not get support from health workers.

Table 2. Overview of Anxiety Categories of Respondents before and after the intervention

| Variable | Frequency | Percent (%) | Total |
|---|---|---|---|
| Anxious (Pre Intervention) | | | |
| Mild | 53 | 88.3 | 88.3 |
| Moderate | 7 | 12.7 | 12.7 |
| Anxious (Post-intervention) | | | |

| | | | |
|---|---|---|---|
| Mild | 58 | 96.7 | 96.7 |
| Moderate | 2 | 3.3 | 3.3 |

Based on the table above shows that in the two intervention and control groups the highest was in the category of mild anxiety, 53 people (88.3%) and 50 people (96.7%) respectively and the least in the control group for post-intervention was only 2 people (3.3%).

Table 3. The average value of anxiety in adolescent pregnant women before and after being given a musical intervention

| Variable | N | Mean | SD | T (Test) | P value |
|---|---|---|---|---|---|
| Pre Music Intervention | | | | | |
| Intervention | 30 | 30.90 | 9.670 | 3.175 | 0.002 |
| Control | 30 | 28.48 | 7.236 | | |

Based on the results of the statistical calculation table the value of t is equal to 3.175 with p-value 0.002 (2-way test), it can be concluded that there are significant differences in the average anxiety level of adolescent pregnant women in both intervention and control groups before and after being given a musical intervention.

Table 4. Bivariate analysis of anxiety levels (in categories) in adolescent pregnant women

| Variables | Anxious | | OR | 95% CI | | P value |
|---|---|---|---|---|---|---|
| | Mild | Moderate | | | | |
| ANC history | | | | | | |
| Regular | 30 (90.9%) | 3 (9.1%) | 1.739 | 0.354 | 8.549 | 0.69 |
| Irregular | 23 (85.2%) | 4 (14.8%) | | | | |
| ANC Frequency | | | | | | |
| <4 times | 37 (86.0%) | 6 (1.0%) | 0.385 | 0.043 | 3.467 | 0.661 |
| ≥ 4 times | 16 (94.1%) | 1 (5.9%) | | | | |
| Pregnancy | | | | | | |
| Complications | 43 (89.6%) | 5 (10.4%) | 0.58 | 0.098 | 3.442 | 0.581 |
| Yes | 10 (83.3%) | 2 (16.7%) | | | | |
| No | | | | | | |
| Motivation | | | | | | |
| Low | 27 (93.1%) | 2 (6,9% | 2.596 | 0.462 | 14.585 | 0.426 |
| Height | 26 (83.9%) | 5 (16.1%) | | | | |
| Family support | | | | | | |
| Not supportive | 16 (94.1%) | 1 (5.9%) | | | | |
| Supports | 37 (86.0%) | 6 (14.0%) | 2.595 | 0.288 | 23.340 | 0.661 |
| Health Worker Support | | | | | | |
| Not supportive | 43 (86%) | 7 (14%) | | | | |
| Supports | 10 (100%) | 0 | 1.163 | 1.040 | 1.300 | 0.539 |

Based on the table 4 the OR value includes the regularity of ANC history (OR = 1.739) which means that irregular ANC history will increase the anxiety of adolescent pregnant women 1,739 times compared to pregnant women who regularly check their pregnancy. Motivation (OR = 2,596) which means that pregnant women those who have low motivation will increase anxiety compared to those with high motivation of 2,596 times and family support (OR = 2,595) which means that pregnant women who do not get family support will experience an increase in anxiety 2,595 times compared to those who get support from the family.

Table 5. Multivariate analysis of anxiety levels of adolescent pregnant women with Karungut music intervention

| Variable | B | SE | Wald | Df | Sig | Exp(B) | 95%CI |
|---|---|---|---|---|---|---|---|
| Music | 1.766 | 1.896 | .895 | 1 | .056 | 3.334 | 0.403-13.511 |
| ANC regularity | 0.184 | .910 | .041 | 1 | .840 | .832 | 0.14-4.954 |
| ANC Frequency | 0.378 | .890 | .181 | 1 | .671 | 1.460 | 0.255-8.344 |
| Complications | 0.675 | .801 | .710 | 1 | .400 | 1.964 | 0.408-9.439 |
| Motivation | -1.328 | .725 | 3.353 | 1 | .067 | .265 | 0.64-1.098 |
| Family Support | 0.848 | .896 | .895 | 1 | .034 | 2.334 | 0.403-13.511 |
| Health Worker Support | -21.85 | 12630.844 | .000 | 1 | .999 | .000 | 0.000 |

Based on the table 5, the results of logistic regression techniques found that other factors that influence the anxiety level of adolescent pregnant women are family support with OR = 2.334 or Expert (B) which can be concluded that pregnant women who get support from their families will reduce anxiety 2,334 times lower compared to pregnant women adolescents who do not get support from the family (p-value = 0.034).

## DISCUSSION

Pregnancy is one of the important periods in a woman's life, which brings many changes not only from the physical aspect but also from the psychological [13]. Anxiety is a normal response to a threat or danger and part of the experience that is usually faced by humans, but it will not be a mental health problem if the response is not exaggerated, in the last three weeks it will be normal. A pregnant woman who has depression, anxiety or stress during pregnancy will increase the risk of being less favorable for the outcome of pregnancy and the baby being born, including emotional problems, the possibility of hyperactivity or cognitive development disorders in her baby [13]. Research has been carried out involving 150 teenage mothers, of whom 72.1% experienced moderate anxiety and 28.9% experienced low anxiety levels [14].

Pregnancy anxiety is an emotional reaction that occurs in pregnant women related to the concerns of mothers with their well-being and fetus, the continuity of pregnancy, childbirth, the period after childbirth and when it has become a mother [15]. Prevalence of anxiety and depression in developed countries is around 7-20% and in the country developing around more than 20% [15] Music is a handle of conditions in certain age groups, especially adolescents, and this is widely believed to change adolescent behavior with regard to popular perceptions of this youth group. The use of popular music will have a significant effect by passing on the assessment of functional *Magnetic Resonance Imaging* (fMRI) [17]. Other studies that have found the effectiveness of listening to music will protect pregnant women from facing stressors, especially those related to changes in pregnancy [18]. Music listening therapy to reduce stress on mothers using an instrument specifically designed to assess the stress of the health of pregnant women.

Music has tremendous power that has an impact on the soul. Music can help a person become more relaxed, reduce stress, create a sense of security, let go of feelings of sadness, make feelings happy, and help reduce pain. Music that is listened intensively can give full strength, in the sense of reflecting self-emotion, enlightenment, and expression [19]. Music can slow down and accelerate the electric waves found in the brain so that it can change the way the body systems work. Music can coordinate with the body during labor.Mothers who are giving birth can be helped to overcome the pain they experience if the mother really wants it. Therefore, it is better to choose music that suits the interests of the mother so that the results obtained are more effective [20].

Pregnant women with a very young age experience the most anxiety. Experienced anxiety is related to changes in the body during pregnancy and will decrease with age for pregnant women [14]. Age affects

the anxiety of pregnant women related to the threat of abnormalities or complications due to pregnancy related to young age is a risky condition. Age will have an impact on the individual's ability to respond in relation to her pregnancy, this is related to coping mechanisms that are less good than the group of pregnant women at an adult age [21]. In adult-aged is more likely to use good coping mechanisms compared to younger age groups.

The Regularly ANC visits to health facilities will affect the anxiety of pregnant women and preparation for childbirth. Antenatal Care is aimed at preparing the health of pregnant women physically and mentally in the face of changes during pregnancy. Compliance with pregnant women can be seen in visits to pregnant women according to standards. A good ANC frequency is expected to reduce the anxiety level experienced by teenage pregnant women [21]. The frequency of ANC depends on the level of adherence of pregnant women to ANC visits according to standards. It is expected that the level of anxiety experienced by adolescent pregnant women will decrease.

Mothers who experience anxiety depend on how adequate support is obtained from their husbands or partners, including support from extended families. In another study, it was found that pregnant women who did not get support from their husbands or partners [14] experienced high levels of anxiety. Support from a poor and limited partner will increase the anxiety experienced by the mother during her pregnancy. Poor and limited support will affect the desire of pregnant women to have their pregnancies checked, which will have an impact on the limited knowledge about the danger signs of pregnancy, so that if there is an inconvenience during pregnancy, it will increase the anxiety of the pregnant woman.

There is a significant relationship between family support and anxiety levels before labor [22]. Pregnant women with high family support will change the response to the source of anxiety and come to their families to pour out their hearts, but if on the contrary, the lack of family support can increase the anxiety of pregnant women who will affect themselves, pregnancy and fetus. Information about the danger signs of pregnancy by in-laws and siblings means that the family strongly supports her pregnancy. Pregnant women with the support of other good family members will change the source of anxiety and come to the family to release complaints [23]. However, if the support of other family members is not good can increase anxiety in pregnant women. Support from other family members is a protective factor for anxiety in third-trimester pregnant women in China, as well as family disharmony can affect maternal anxiety [24]. Family support is a protective factor, because there is a significant relationship between family support and anxiety levels of adolescent pregnancy. High of Family support will change the response to the source anxiety and the lack of family support can increase the anxiety level and will affect pregnancy condition and her's fetus. The danger signs information from mother in law and sibling means that strongly of family supports her pregnancy.

Based on the results of bivariate analysis, there is an influence between high motivations on anxiety of adolescent pregnant women. Mother's motivation will be improve the behavior of adolescent pregnant women to do antenatal care regularly. In another study it was found that at each ANC visit, officers rarely provided education to pregnant women, for example in terms of caring for their breasts, cleaning their vagina, dressing comfortably, etc. Especially for pregnant women who have first performed ANC, officers only ask for their identity and estimate the time of delivery [25].

## CONCLUSION

This research found that the Karungut Music decreases anxiety level of the adolescent's pregnancy. Another factor affect of the anxiety level is regular doing antenatal care, motivation and support from their husband or families. Karungut music can be an alternative to improve the health of the adolescent's pregnancy in the Dayak comunity, especially to reduce anxiety.

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