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Pregnant gymnastics, ANC, and IEC pregnancy lower the stress on pregnant women



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ABSTRACT

Background: Psychosocial stress in pregnant women is one of the factors that cause the disorder of metabolism for pregnant women. Maintaining physical and mental health on a pregnant woman can be conducted by ANC, pregnant gymnastics, and IEC pregnancy to optimize health degrees while pregnant and expedited the process of childbirth.

Aim: This study aimed to analyze the relationship of the gymnastics, ANC, and the IEC pregnancy with stress rate on pregnant women.

Methods: This was an observational analytical with a case-control approach. The subject of this study was the mother of a toddler as

many as 390, ages 2 to 2.5 years that live settled in Klaten Regency, Karanganyar and Sragen.

Results: Stress while pregnant is significantly associated with the gymnastics pregnant ($p = 0.023$; CI 0.38-0.93; OR 0.69), ANC ($p = 0.001$; CI 0.01-0.57; OR 0.75) and IEC of pregnancy ($p = 0.049$; CI 0.45-1.00; OR 0.69).

Conclusion: Stress during pregnancy can be reduced by doing pregnant gymnastics and the ANC. Granting education can also be used as an alternative to reduce stress during pregnancy.

Keywords: Gymnastic, ANC, IEC pregnancy, stress

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INTRODUCTION

Psychosocial stress in pregnant women is one of the factors that cause the disorder of metabolism for pregnant women. One of the metabolism disorders during pregnancy usually raise blood pressure (hypertension). Several studies also reveal the nutritional status and stress can affect the growth of the fetus in the womb. A poor nutritional status and high-stress levels before and during pregnancy can cause low birth weight (LBW), inhibit infant brain development, until the onset of infection in infants.^{1,2} Examination of pregnancy (Antenatal Care, ANC) is an examination for pregnant women so that experiencing a healthy pregnancy to vaginal birth. The programme performed services by providing surveillance and inspection of the pregnancy to optimize the mental and physical health of the mother and fetus.^{3,4}

Maintaining physical and mental health of the mother during pregnancy can be conducted with gymnastics pregnant. This activity is an exercise to defend elastic ligaments, abdominal wall, contraction, and relaxation as well as regulate the breathing techniques help the time of labor dating.^{5,6} Gymnastics pregnant have a meaningful relationship towards birthing mothers waging.⁷

Communication, information, and Education (IEC) is an activity in conveying messages about health and others. This activity is part of the promotion of nutrition to improve the degree

of public health including in changing behavior, environment, the physical or mental condition of the society. The impact of the negative against the health of individuals and the community can occur minus.⁸⁻¹⁰ IEC pregnancy can also be a process essential for pregnant women due to physiological changes include, the nutrition needs of pregnant women, the pattern of sexual intercourse, the disorder during pregnancy, and therapy can lower the level of stress on pregnant women and optimize the degree of health while pregnant and expedited the process of childbirth.

METHODS

This study was an observational analytical with a case-control approach. The subject was 390 mothers of toddlers ages 2 to 2.5 years that live in Klaten, Karanganyar, and Sragen. It was conducted in February 2018 to June 2018. The sampling techniques used are multistage random sampling.

RESULTS

Table 1 showed that the vast majority of the subject that are experiencing stress during pregnancy as much as 184 (47.2%). The characteristics of the mother stress which experienced no stress were as many as 206 (52.85%). Most of them did the ANC in accordance with the gestational age was as much as 375 (96.2%). The characteristics of

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IEC pregnancy were less than 217 (55.6%) related to gymnastics pregnant. Most respondents who follow gymnastics pregnant were as many as 293 (75.1%).

Table 2 showed the bivariat analysis relationship between the ANC and the stress. It obtained the value of *chi-square* with Odds Ratio (OR) of 0.75 and p value = 0.001; CI (95%) = 0.01 up to 0.57. Based on those results, it could be interpreted that the mother who did the ANC had stress possibility about 0.75 times compared to those who did no ANC. This indicates that there was a significant relationship between the ANC and stress.

IEC obtained OR of 0.69 and p-value = 0.049; CI (95%) = 0.45 to 1.00. Based on those results, it could be interpreted that the mother got the pregnancy had a possibility of IEC 0.69 times to stress than those who had not. This showed that there was a significant relationship between IEC pregnancy and stress.

Both stress and pregnant gymnastics obtained OR of 0.59 and p-value = 0.023; CI (95%) = 0.38 to 0.93. Based on those results, they could be interpreted that the mothers who followed pregnant gymnastics had the possibility of stress 0.75 times compared to those who did not. This showed that there was a significant relationship between gymnastics and stress.

Table 1 Characteristics of subjects

Characteristics of Subjects	Frequency (n)	Percentage (%)
Stress		
No	206	52.8
Yes	184	47.2
ANC		
Not a routine	15	3.8
Routine	375	96.2
KIE Pregnancy		
Less	217	55.6
Good	173	44.4
Pregnant Gymnastics		
Do not follow	96	24.9
Follow	293	75.1

ANC, antenatal; KIE, educational information communication

Table 2 Relationships of ANC, IEC pregnancy and pregnant gymnastic against stress in pregnant women

Group Variable	Stres				OR	CI (95%)		P
	No		Yes			Lower limit	Upper limit	
	n	%	N	%				
ANC								
Yes	192	(51.2)	183	(48.8)	0.75	0.01	0.57	0.001
No	14	(93.3)	1	(6.7)				
Total	206	(52.8)	184	(47.2)				
KIE Pregnancy								
Less	105	(48.4)	112	(51.6)	0.69	0.45	1.00	0.049
Good	101	(58.4)	72	(41.6)				
Total	206	(52.8)	184	(47.2)				
Pregnant gymnastic								
Do not follow	45	(43.3)	59	(56.7)	0.59	0.38	0.93	0.023
Follow	161	(56.3)	125	(43.7)				
Total	206	(52.8)	184	(47.2)				

ANC, antenatal; KIE, educational information communication; OR, odd ratio; CI, confidence interval.

DISCUSSION

The relationship between ANC and Stress

ANC and stress have a negative relationship and statistically significant. The presence of pregnancy examinations (ANC) has a vital role in the knowledge of pregnant women. It can lower maternal and child mortality. It can maintain mother health during the pregnancy until labor and childbirth as well as keep the baby born vigorously. A routine checkup can also aware the pregnant women to monitor their several risks of pregnant life, implement some planning to prevent disorders, and reduce maternal and fetal mortality as well.¹¹ It is an education, observation, and treatment program related to pregnancy. Lower visitation during pregnancy can increase the occurrence of stress. The level of knowledge can provide different conditions, i.e., lower the level of knowledge, more increase the presence of stress.¹²

Stress during pregnancy a symptom caused before or during pregnancy, both sourced from oneself or others. Indirectly, it triggered its manufactures (adrenaline and noradrenaline) that caused uterine contractions and made an impact on the baby as well. Some risk factors cause the onset of stress on pregnant women such as education, age, employment status, previous experience of pregnancy and childbirth, and maternal health status. Family support is one of the excellent intervention strategies in helping pregnant women to overcome problems experienced and lowering the level of anxiety of the mother during pregnancy.¹³

The relationship between IEC pregnancy and stress

Inadequate nutritional intake and stress on pregnant women can also cause the onset of impaired fetal development. Disorders of the fetus can also be caused by TORCH infection and sexually transmitted diseases to be muted and deaf by the time the baby born.¹⁴

Based on the results of the research, it is known that IEC has an influence on pregnancy. IEC on pregnancy is an important thing that must be applied during pregnancy. At pregnancy period, there are physiological changes, nutritional status demands, the pattern of sexual intercourse, and the health risk problems during pregnancy. Pregnant women should have a good knowledge of related processes and true pregnancy.^{15,16}

IEC is usually implemented at ANC as early as possible. It is on the first period one month late. Examination should be done as early as possible when menstruation is one month late, re-examination can be done once a month until the womb reaches 7 months and then can be done once every 2 weeks every month until the gestational age

reaches 9 months and do an examination once a week at the end of pregnancy until birth so that IEC received by the mother can be received as much as possible.¹⁷ The fear of pregnant women is usually in the form of anxiety about the occurrence of postpartum deaths, both maternal and neonatal deaths. Mothers who do not get IEC pregnancy during pregnancy are more at risk of experiencing stress. Stress during pregnancy can impact on the fetal safety and health.¹⁸

The relationship between gymnastics pregnant and stress

Pregnant gymnastics has a negative relationship with stress and has a significant influence. Stress during pregnancy must be handled properly.¹⁹ One of the interventions that can be conducted to lower stress during pregnancy is gymnastics pregnant. Gymnastics pregnant therapy is an exercise modulated to pregnant women to prepare mentally, physically or psychologically to keep maternal and fetal health. Those who are pregnant (first-time primigravida) or have ever been pregnant (multigravida), gymnastics program is strongly recommended for the sake of the health of the pregnant mother and fetus.²³

Gymnastics pregnant may decrease the risk of occurrence of stress because it relaxes the muscles during pregnancy.²⁴ Gymnastics can help the breathing techniques to get oxygen, prepared to face childbirth; strengthen and maintain the elasticity of the muscles of the abdominal wall; prevent or resolve pain in the buttocks, in the lower abdomen, and the hemorrhoids; and reduce complaints arising due to changes in body shape.^{25,26} Gymnastics helps childbirth without difficulty, as well as maintain a healthy mother and baby after giving birth. The occurrence of stress on pregnancy occurs due to several factors, one of them due to lack of information about pregnancy, a low socioeconomic status so that preparation of the mother and the family during pregnancy less a maximum.²⁷

CONCLUSION

Stress during pregnancy cause disorders of metabolism while pregnant. It can cause many health problems. In addition to the impact on pregnant women, stress can also affect fetal development. The effects that can be caused by stress during pregnancy can lower the status of maternal health and drive a wicked delivery as well as reveal muted and deaf on newborns.

ANC, IEC, and gymnastics pregnant can lowering the risk of the occurrence of stress on pregnant women. By ANC routinely, postpartum anxiety will be reduced because in addition pregnant women

will also get IEC about pregnancy. Gymnastics can help relax the muscles especially in the abdomen and these interventions help the expectant mothers to prepare physically and mentally. Especially, it drives pregnant women to have both relaxation and contraction so that it support the labor seamlessly and securely.

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DISCLOSURE

There are no conflicts interest related to the publication of this journal.

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ETHICAL CLEARANCE

The research subject has obtained an explanation of the research being carried out. All data taken is based on the approval of the subject of the research and confidentiality of information is maintained by the researcher.

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