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Integrated antenatal care reduce childbirth anxiety among primigravida women

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ABSTRACT

Pregnant women's anxiety, if not well-treated, may influence both the physical and psychological conditions of mother and fetus. This study aimed to analyze the correlation between integrated antenatal services and anxiety on facing facing childbirth among primigravida women. This was an observational analytic study used Cross Sectional design. The sample in this study was 55 primigravida women in their third trimester, whom were selected by using a total sampling technique. The study was conducted in a Public Health Centre within Yogyakarta Province. The analysis employed bivariate analysis technique with *Chi-Square*. The results showed that non-integrated antenatal care had correlation with anxiety about facing labor with p=0.033 and OR=5.417, which explained that non integrated antenatal care significantly increases anxiety among primigravida women. Therefore there is a need tailored services which could improve the quality of Integrated Antenatal Care to reduce pregnant women's anxiety on facing childbirth.

1. Introduction

Anxiety and depression during pregnancy are are problems which have high prevalence, i.e. around 12.5-42% (World Helath Organization, 2008). Anxiety and depression in developed countries are around 7-20%, while those in developing countries are around 20% (Biaggi, A. Conroy, S., Pawlby, 2016). Anxiety is included in one of the psychological changes in pregnant women in their third trimester (from week 28 to week 40). The third trimester is often referred to as waiting period with anxiety. Some anxiety arises in the third trimester, for examples anxiety about complication within the witness of childbirth, anxiety related to childbirth process such as pain, loss of control, lack of self efficacy to engage in childbirth, anxiety if the baby cannot be born, or anxiety whether their vital organs will be ruptured (Varney, 2010).

One of the factors that could potentially trigger anxiety during pregnancy is lack of integrated antenatal care. Integrated antenatal care is a comprehensive and high quality antenatal care provided to all pregnant women by doctors, midwives and trained nurses (Ministry of Health of the Republic of Indonesia, 2010). Antenatal examination in pregnant women is needed to be accessed periodically in accordance with the standard, i.e. at least 4 (four) times during pregnancy. In addition, the minimum standards of antenatal service include 10 T, namely: Weight and height measurement, nutritional status (mid-upper arm circumference measurement), blood pressure measurement, fundal height

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measurement, identification of fetal presentation and fetal heart rate (FHR), administration of Tetanus Toxoid Vaccine, prescription of Fe tablets (90 tablets), conducting laboratory tests, case management, and effective dialog or Communication, Information and Education (IEC) (Ministry of Health of the Republic of Indonesia, 2010).

Based on a study conducted by (Iriani, 2014) showed that there was a correlation between the frequent of ANC visits and level of anxiety about facing the first stage of childbirth. Pregnant women with frequent ANC visits would potentially have improved understanding of pregnancy, childbirth, and postpartum, which subsequently reducing their anxiety about engaging childbirth process. When a pregnant woman has frequent antenatal visits, she would probably gain more information about her pregnancy, identify when there is a sign of complication and maintaining the healthy life.

Anxiety during pregnancy, if not seriously treated, may have influence on both the physical and psychological conditions of mother and fetus. A study by (Rubertsson, C., Hellström, J., Cross, M. & Sydsjö, 2014) on 1,175 pregnant women revealed that anxiety could potentially triple the anxiety about facing labor and had bigger chance (1.7 times) of increasing the rate of caesarean section. (Sadock, B., Sadock, 2010) stated that anxiety due to fear of labor may continue until delivery and cause postpartum depression.

Based on data from the Central Bureau of Statistics of Special Region of Yogyakarta (DIY) in 2016, the number of pregnant women in Yogyakarta Province was 47,006, and the highest distribution was found in Sleman Regency, i.e. 15,488 pregnant women or 32.94% out of the total pregnant women in Yogyakarta Province in 2016. The results of a preliminary study conducted at the Maternal and Child Health (MCH) of a Public Health Centre in January-April 2018 showed that there were 256 pregnant women, 44 of which were primigravida women in their third trimester. Based on the results of interviews with 10 primigravida women in their third trimester, 8 of them stated they were anxious about engaging childbirth. Five of them stated that they were anxious about their lives and their babies during process of childbirth, while three of them mentioned that they were anxious about their baby and the pain they might experience during childbirth process.

2. Method

This was an observational analytic study used Cross Sectional design. The independent variable in this study was integrated antenatal care. The dependent variable was anxiety about facing childbirth among primigravida women. The confounding variables in this study were age, occupation, education, family income, and health status. All the confounding variables in this study were already controlled. The variable of age was controlled by selecting respondents who were between 20-35 years old. The variable of occupation was controlled by selecting respondents who were unemployed. The variable of family income was controlled by selecting respondents whose family income was above the Provincial Minimum Wage. The variable of maternal health status was controlled by selecting respondents who did not have any complications and comorbidities during pregnancy. The variable of pregnant women's education was controlled by selecting respondents whose education was at least senior high school or equivalent.

55 primigravida women participated within this study and they were selected by using total sampling technique. The inclusion criteria of the respondents were at 32 weeks gestation or more, Indonesian resident, have no complication and married legally. Whilst, the inclusion criteria were women with mental disabilities. Respondents were identified from Antenatalcare (ANC) record in public health centres within Sleman Regency. Data were collected by using *Pregnancy-Related Anxiety Questionnare-Revised* 2 (PRAQ-R2) (Huizink, Delforterie, Scheinin, & Tolvanen, 2016) and *Quality Of Prenatal Care Questionnaire* (Heaman et al., 2014). Data collection conducted from January-April 2018 and were analysed by using Chi-Square Test for bivarate analysis and by using logistic regression for multivariate analysis.

3. Results

3.1. Univariate Analysis

a. Respondent Charateristics

Table 1 shows that most of the respondents were at the age of 20-30 years old i.e. 94.5%. 83.6% of them graduated from high school and 63.6% of them had health insurance.

Table 1. Frequency Distribution of Respondent Characteristics

No	Characteristics	Total	
		N	***%***
1	Age		
	20-30 years old	52	94.5
	30-35 years old	3	5.5
2	Education		
	Senior High School	46	83.6
	Undergraduate Study	9	16.4
3	Occupation		
	Employed	0	0
	Unemployed	55	100
4	Family Income		
	≤ Provincial Minimum Wage	0	0
	> Provincial Minimum Wage	55	100
5	Health Insurance		
	Having Health Insurance	35	63.6
	Not Having Health Insurance	20	36.4

Source: Primary Data 2018

b. Anxiety about Facing Childbirth

Table 2 shows that 52.7% of primigravida women were not anxious about facing childbirth and the rest of respondent i.e 47.3% were anxious.

Table 2. Frequency Distribution of Anxiety

No	Anxiety about Facing Labor	N	Percentage (%)
1	Anxious	26	47.3%
2	Not Anxious	29	52.7%
	Total	55	100%

Source: Primary Data 2018

The anxiety level in this study was greater than that of WHO (2008) which showed that anxiety and depression during pregnancy are problems with a high prevalence, i.e. around 12.5-42% (World Helath Organization, 2008). The prevalence of anxiety in this study was also in line with a study by (Biaggi, A. Conroy, S., Pawlby, 2016), showing that anxiety and depression in developed countries are around 7-20% while in developing countries are around 20% (Biaggi, A. Conroy, S., Pawlby, 2016).

c. Criteria of Anxiety about Facing Childbirth

Table 3 shows that 70.9% of respondents had anxiety about facing childbirth process i.e. 58.2% anxious about the baby's congenital dissorder and 56.4% anxious about personal appearance.

Table 3. Frequency Distribution of Anxiety Criteria

No	Criteria	N	Percentage (%)
1	Anxiety about labor		
	Anxious	39	70.9
	Not Anxious	16	29.1
2	Anxiety about delivering a baby with congenital disorder		
	Anxious		
	Not Anxious	32	58.2
	Anxiety about personal appearance	23	41.8
3	Anxious		
		31	56.4
	Not Anxious	24	43.6

Source: Primary Data 2018

Anxiety is included in one of the psychological changes in pregnant women in their third trimester (from week 28 to week 40). The third trimester is often referred to as waiting period with anxiety. Some anxiety arises in the third trimester, for examples anxiety about delivering a baby with a congenital dissorder, anxiety related to childbirth and birth (pain, loss of control, and other unknown factors), anxiety whether they will know when they will give birth, anxiety if the baby cannot be born, or anxiety whether their vital organs will be ruptured (Varney, 2010).

d. Integrated Antenatal Care

Table 4 shows that 76.4% women stated that they received integrated antenatal care, whist the rest have not received integrated antenatal care.

Table 4. Frequency Distribution of Integrated Antenatal Care

No	Criteria	N	%
1	Integrated	42	76.4%
2	Non-integrated	13	23.6%
	Total	55	100%

Source: Primary Data 2018

Integrated antenatal service is a comprehensive and high quality antenatal care provided to all pregnant women by health workers (Ministry of Health of the Republic of Indonesia, 2010). Antenatal care is considered integrated if the number of antenatal visits is according to the standards: the total is at least four times during pregnancy (at least one visit during the first trimester, at least 1 visit during the second trimester, and at least 2 visits during the third trimester) and it covers the minimum standards of antenatal care (10 T), i.e. Weight and height measurement, nutritional status (mid-upper arm circumference measurement), blood pressure measurement, fundal height measurement, identification of fetal presentation and fetal heart rate (FHR), administration of Tetanus Toxoid Vaccine, prescription of Fe tablets (90 tablets), conducting laboratory tests, case management, and effective dialog or Communication, Information and Education (IEC) (Ministry of Health of the Republic of Indonesia, 2010).

3.2. Bivariate Analysis

a. Correlation between Integrated Antenatal Care and Anxiety about Facing Childbirth

Table 5 shows that most of the respondents who received non-integrated antenatal care experienced anxiety i.e. 76.9%, but 23.1% of them did not experience it. On the other hand, 61.9% of the respondents who received integrated antenatal care did not experience anxiety and 38.1% of them experienced anxiety.

Table 5. Correlation between Integrated Antenatal Care and Anxiety about Facing Labor

Antenatal Service \ Anxiety	Anxious		Not Anxious		Total		p-value	OR
	N	*%*	*N*	*%*	*N*	*%*		
Non-integrated	10	76.9	3	23.1	13	100	0.033	5.417
Integrated	16	38.1	26	61.9	42	100		
Total	26	47.3	29	52.7	55	100		

Source: Primary Data 2018

Therefore, it can be concluded that the respondents who received non-integrated antenatal care experienced anxiety about facing labor. The results of the Chi-Square Test showed the value of p=0.033 < the value of α=0.05, indicating that there is a correlation between integrated antenatal care with anxiety about facing labor. The analysis resulted in Odds Ratio (OR) = 5.417, meaning that the chance of women who received non-integrated antenatal care to experience anxiety about facing labor was 5.4 times bigger.

The minority of the respondents in this study (13 respondents or 23.6%) did not receive integrated antenatal care. Failure in receiving integrated antenatal care according to the standards may lead to anxiety among primigravida women about facing labor. On the other hand, those with regular antenatal examinations may have improved understanding of pregnancy, childbirth, and postpartum, thus reducing the anxiety about facing labor.

A few respondents in this study did not receive integrated antenatal care, but they did not experience anxiety (3 respondents or 23.1%). This is because the respondents in this study had a high level of education, i.e. they graduated from at least senior high school, had an ideal age to get pregnant (20-35 years old), unemployed, had good family income and good health status. Most of the respondents in this study also had health insurance that could cover the cost of labor. In fact, having health insurance may help pregnant women become more prepared for labor.

4. Discussion

The results of this study support the results of a study by (Iriani, 2014), revealing that there is a correlation between regular ANC visits and anxiety about facing the first stage of labor. Pregnant women with regular ANC visits will have improved understanding of pregnancy, childbirth, and postpartum, thus reducing the anxiety about facing childbirth (Cox, E., Raines, C., Kimmel, M., Richardson, E., Stuebe, A., & Meltzer- Brody, 2017). When a pregnant woman has regular antenatal visits, she will gain more information about her pregnancy, identify when there is any complications and healthy life during pregnancy (Davies, L., Page, N., Glover, H., & Sudbury, 2016).

In fact, the results of this study are also in line with the results of a study by (Goe, 2011), showing that pregnant women who receive good and quality ANC services will have a lower level of anxiety compared to those who do not receive quality ANC services (Goe, 2011).One of the factors that influence the anxiety during pregnancy is antenatal care. Integrated antenatal care is a comprehensive and high quality antenatal care provided to all pregnant women by doctors, midwives and trained nurses (Ministry of Health of the Republic of Indonesia, 2010).

Antenatal examination in pregnant women is done periodically in accordance with the standard, i.e. at least 4 (four) times during pregnancy. In addition, the minimum standards of antenatal service

include 10 T, namely: Weight and height measurement, nutritional status (mid-upper arm circumference measurement), blood pressure measurement, fundal height measurement, identification of fetal presentation and fetal heart rate (FHR), administration of Tetanus Toxoid Vaccine, prescription of Fe tablets (90 tablets), conducting laboratory tests, case management, and effective dialog or Communication, Information and Education (IEC) (Ministry of Health of the Republic of Indonesia, 2010).

Regular and quality Antenatal Care (ANC) is expected to help every pregnant woman have pregnancy without any complications (Wiknjosastro, 2008). In addition to monitoring maternal and fetal health, ANC services also include psychological services for pregnant women, thus the quality of ANC services serves as one of the factors that contribute to primigravida women's anxiety about facing labor (Fenwick, J., Toohill, J., Slavin, V., Creedy, D. K., & Gamble, 2018). Pregnant women with quality ANC services will have a lower level of anxiety compared to those without quality ANC services(Goe, 2011). The importance of quality antenatal care for women who experience anxiety about facing labor. In fact, health education provided during antenatal care may improve pregnant women's knowledge and preparedness to face labor, thus reducing their anxiety during pregnancy and helping them prepare for labor (Stoll, Kathrin., 2018).

5. Conclusion

There is a correlation between integrated antenatal care and anxiety about facing labor with $p = 0.033 < \alpha = 0.05$. The chance of women who receive non-integrated antenatal care to experience anxiety about facing labor is 5.4 times bigger.

6. Recomendation

The results of this study are expected to be used as an evidence to improve antenatal care, so its implementation can be more effective and efficient, and can provide high quality services for pregnant women, especially for those in their third trimester, in order to reduce anxiety about facing childbirth. The results of this study are also expected to serve as an information for further research to comprehensively understand the phenomenon experienced by respondents regarding the quality of antenatal care in relation to anxiety about facing childbirth.

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