

## Risk Factor Analysis of Anxiety Disorder in Third Trimester Pregnant Women

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### ABSTRACT

**Introduction:** Pregnancy is normal for productive women. Pregnancy anxiety is an emotional response related to the concern felt by the mother for the well-being of herself and her fetus during pregnancy, childbirth and future motherhood. The purpose of this study was to determine the relationship between age, education level, occupation, economy, parity, environmental status, and religious spiritual activity on anxiety disorders in third trimester pregnant women in Somba Opu District, Gowa Regency.

**Methods:** This research is an observational study with a cross-sectional design using quantitative data using a purposive sampling method with the slovin formula and a population of 445 people is obtained to determine the risk factors for anxiety disorders in third trimester pregnant women. The instrument in this study used a questionnaire. The sample used in this study consisted of 136 third trimester pregnant women. Processed data were analyzed according to the Chi Square test  $p < 0.05$ .

**Results:** The results showed that there was a significant relationship between the chi-square value between age (0.000), educational level (0.000), occupation (0.021), economic factors (0.000), parity (0.000) and religious spiritual activity (0.010) with the level of anxiety disorders did not show a significant relationship between living environment status and anxiety in third trimester pregnant women (0.514).

**Conclusion:** There is a relationship between age, education level, occupation, economic factors, parity, and religious spiritual activity with anxiety levels and there is no relationship between living environment status and anxiety in third trimester pregnant women.

**Keywords:** Female; anxiety; anxiety disorders; pregnancy trimester; risk factors



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## Introduction

Productive women are closely related to pregnancy. The women will definitely be very happy to know that she is pregnant. However, being pregnant is also closely related to anxiety. This arises because of psychological and physical factors that are worried about the condition of the baby. the changes referred to are not experiencing menstruation, breasts begin to enlarge, abdomen enlarges, enlarges the shape of the uterus, increases body weight, weakens the relaxation of the digestive tract muscles, sensory sensitivity, enlarges extremities and changes in the working system of the organs in the body.<sup>1,2</sup>

The most common psychiatric disorder is anxiety. The National Comorbidity Study reports that 1 in 4 people who carry out the examination meet the diagnostic criteria for at least one anxiety disorder. Women dominate this anxiety (30.5%) compared to men (19.2%).<sup>3</sup>

Emotional worries related to the worries felt by the mother are responded to with excessive anxiety especially about the welfare of themselves and the fetus both during pregnancy, childbirth and the mother's role as a parent.<sup>4</sup>

Mothers often experience anxiety when approaching labor, namely the third or final trimester, how mothers think about pain during childbirth, whether their lives and the lives of their fetuses are safe or not. When the delivery schedule is getting closer, especially during the first pregnancy, it is natural that feelings of anxiety and fear arise, this is something new and can be a meaningful experience.<sup>5</sup>

Anxiety and fear of getting pregnant can cause a storm of contractions to miscarriage and increased blood pressure so that it can be one of the triggering factors for the occurrence and increase in intoxication.<sup>6</sup>

Based on data from the Ministry of Health of the Republic of Indonesia, in 2016 there were 373,000,000 pregnant women in Indonesia, and as many as 107,000,000 pregnant women (28.7%) experienced anxiety in the face of childbirth. There are about 679,765 pregnant women from the entire population in Java, who experience anxiety in the face of childbirth 355,873 people (52.3%).<sup>7</sup>

South Sulawesi Province is one of the provinces with the highest number of maternal and infant deaths in Indonesia. Based on data from the South Sulawesi Health Office, every week two mothers and 16 newborns die in South Sulawesi. In 2017 there were 115 maternal deaths and 817 neonatal deaths. Gowa Regency was recorded as the district with the highest number of maternal death cases at 113 cases, while the largest number of neonatal deaths occurred in Jeneponto Regency with 79 deaths. (Provincial Health Office of South Sulawesi, 2017). Many factors cause high maternal mortality and infant mortality, one of which is the emotional condition of the mother during pregnancy to birth.<sup>8</sup>

The purpose of this study was to determine the relationship between age and level of education, occupation, economy, parity, environmental status, and spiritual activity on anxiety disorders in third trimester pregnant women.

## Method

This study was an observational study with a cross sectional approach using quantitative data. The independent variables in this study are age, education, occupation, economic status, parity, environmental status, while the dependent variable is anxiety disorders. The research was conducted in two locations, namely in the Syekh Yusuf Hospital area and the Somba Opu Health Center. In conducting this research there are matters related to research ethics, namely by making a letter of introduction addressed to a party or agency as an application for permission to conduct research with research number 9676/S.01/PTSP/2020

The study population was all third trimester mothers who had ante-natal care at Syekh Yusuf Hospital and the Somba Opu Health Center in July-September 2020, totaling 445 people. The sample used amounted to 136 samples, with the sampling technique using purposive sampling. The sample inclusion criteria were pregnant women with a gestational age of 28-40 weeks, while the sample exclusion criteria were pregnant women who were mentally and physically ill and had a history of chronic disease before and during pregnancy. The data used in this study are primary data and secondary data obtained from the questionnaires made. After the data is collected, then the data is processed in SPSS to see the relationship between the independent and dependent variables using the chi-square hypothesis test with a confidence level of 90% ( $\alpha = 0.10$ ).

## Result

### Univariate Analysis

**Table 1. Distribution of respondents based on the level of anxiety in third trimester mothers in Somba Opu district, Gowa regency in 2020 (n=136)**

Characteristic	N (%)
<b>Anxiety levels</b>	
Non Anxiety	13 (9,6)
Anxiety	40 (29,4%)
Moderate Anxiety	48 (35,3%)
Severe Anxiety	34 (25%)
Very Severe Anxiety	1 (0,7%)

**Source: Primary Data**

Table 1 above shows the distribution of the number and anxiety levels of the respondents. Moderate level was 48 respondents (35.3%) followed by mild anxiety by 40 respondents (29.4%) followed by severe anxiety by 34 respondents (25%). While not anxious as many as 13 respondents (9.6%) and 1 person (0.8%) with very severe levels of anxiety.

**Bivariate Analysis**

**Table 2. The relationship between age and anxiety levels of third trimester pregnant women**

		Age			Total	Chi-Square (p-value)
		Young Age <20 <sup>th</sup>	Productive Age (20-35 <sup>th</sup> )	Old Age (>35 <sup>th</sup> )		
<b>Anxiety Disorder</b>	Non Anxiety	0	21	0	21	0.000
	Anxiety	0	33	3	36	
	Moderate Anxiety	2	39	3	44	
	Severe Anxiety	15	15	4	34	
	Very Severe Anxiety	0	1	0	1	
<b>Total</b>		17	109	10	136	

**Source: Primary Data**

Table 2 explained a chi-square of 0.000 was obtained, which means there is a significant correlation between age and the occurrence of anxiety disorder in third trimester pregnant.

**Table 3. The relationship between education and anxiety level in third trimester pregnant**

		Level of Education					Total	Chi-Square (p-value)
		Not School	Graduat ed from element ary school	Graduat ed from junior high school	Graduat ed from high school	Bache lor		
<b>Anxiety Disorder</b>	Non Anxiety	0	0	0	0	11	11	0.000
	Anxiety	0	0	0	22	16	38	
	Moderate Anxiety	0	2	4	35	10	51	
	Severe Anxiety	2	7	7	15	4	35	
	Very Severe Anxiety	0	1	0	0	0	1	
<b>Total</b>		2	10	11	72	41	136	

**Source: Primary Data**

The results of this study obtained a chi-square of 0.000 which means there is a significant correlation between the relationship between education level and the occurrence of anxiety disorder in third trimester pregnant women.

**Table 4. The relationship between work and anxiety levels in third trimester pregnant women**

	Age Factor					Total	Chi-Square (p-value)
	Unemployment	Merchant	Private employees	Government employees	Other		
Non Anxiety	4	1	7	3	0	15	0.021
Anxiety	18	4	8	5	0	35	
Anxiety Disorder	37	7	4	2	1	51	
Moderate Anxiety	27	3	4	0	0	34	
Severe Anxiety	1	0	0	0	0	1	
Very Severe Anxiety							
<b>Total</b>	87	15	23	10	1	136	

**Source: Primary Data**

Table 4 above shows that in the highest group of respondents who did not work or were housewives, who experienced moderate anxiety as many as 37 people (27.2%). The results of this study obtained a chi-square of 0.021 which means there is a significant correlation between the relationship between the work of pregnant women and the occurrence of anxiety disorder in third trimester pregnant women.

**Table 5. The relationship between economic factors and anxiety levels in pregnant women's third trimester**

	Economics Factors		Total	Chi-Square (p-value)
	Low economy	High economy		
Non Anxiety	3	12	15	0.000
Anxiety	24	15	39	
Anxiety Disorder	40	9	49	
Moderate Anxiety	31	1	32	
Severe Anxiety	1	0	1	
Very Severe Anxiety				
<b>Total</b>	99	37	136	

**Source: Primary Data**

Table 5 explained that in the group of respondents who have a low economic level (have a total income below Rp.3,103,800), who have a severe anxiety level as many as 31 people (22.8%), who have moderate anxiety as many as 40 people (29.4%), who have mild anxiety as many as 24 people (17.6%). The results means there is a significant correlation between the relationship of economic factors with the occurrence of anxiety disorder in third trimester pregnant women.

**Table 6. The relationship between maternal parity and anxiety levels in pregnant women’s third trimester**

		Parity Factors				Total	Chi-Square (p-value)
		hasn't given birth yet/first pregnant	1 child	2 child	3 child		
Anxiety Disorder	Non Anxiety	0	1	10	3	0	0.000
	Moderate Anxiety	3	16	17	2	0	
	Severe Anxiety	20	13	12	6	2	
	Very Severe Anxiety	20	7	1	1	1	
		0	1	0	0	0	
<b>Total</b>		43	38	40	12	3	136

**Source: Primary Data**

Table 6 above shows that in the highest group of respondents who had a first pregnancy (primigravida), who experienced severe anxiety as many as 20 people (14.7%), who had moderate anxiety levels as many as 20 people (14.7%). The results of this study obtained a chi-square of 0.000 which means there is a meaningful correlation between the relationship of parity with the occurrence of anxiety disorder in third trimester pregnant women.

**Table 7. The relationship between environmental status and anxiety levels in third trimester pregnant women**

		Risk Factor		Total	Chi-Square (p-value)
		Living with husband	Living with family		
Anxiety Disorder	Non Anxiety		7	7	0,514
	Moderate Anxiety		25	13	
	Severe Anxiety		30	20	
			17	17	
<b>Total</b>			79	57	136

**Source: Primary Data**

Table 7 explained the results obtained a chi-square of 0.514 there is no significant correlation between the relationship between environmental status and the occurrence of anxiety disorder in third trimester pregnant women.

**Table 8. The relationship between religious spiritual activity and anxiety levels in third trimester pregnant**

		women			Total	Chi-Square (p-value)
		Good Spiritual	Risk Factor Spiritual Enough	Less Spiritual		
Anxiety Disorder	Non Anxiety	7	6	0	13	0.010
	Anxiety	13	23	0	36	
	Moderate	12	41	0	53	
	Anxiety					
	Severe	1	31	1	33	
	Anxiety					
	Very Severe	0	1	0	1	
Anxiety						
<b>Total</b>		33	102	1	136	

Source: Primary Data

Table 8 explained the results of this study obtained a chi-square of 0.010 which means there is a significant correlation between the relationship between religious spiritual activities and the occurrence of anxiety disorder in third trimester pregnant women.

### Discussion

Based on the young age group (<20 years), totaling 17 people (12.5%), the majority had a severe level of anxiety of 15 people (11%). Whereas in the third trimester pregnant women in the moderate age group (20-35 years) as many as 109 people (80%) experienced moderate anxiety, namely as many as 39 people (28.7%), and in pregnant women in the old age group (> 35 years) The majority of 10 people (7.4%) experienced severe anxiety as many as 4 people (3%). The research results obtained were correlated with research studies, the majority of which were in the young age group (<20 years). According to the researcher Handayani (2017), mothers aged <20 years and ≥ 35 years often experienced feelings of anxiety and fear of giving birth. Pregnancy at that time is included in the category of pregnancy that has a high risk so that abnormal births can occur.<sup>9</sup>

This study is in line with previous studies, namely that of 53 respondents in the third trimester of primigravida pregnant women who had a high level of education (graduates ≥ high school), most of them had a moderate level of anxiety as many as 40 people (75.5%), followed by pregnant women who had a high level of anxiety. mild as many as 7 people (13.2%), while pregnant women who have an education level < high school have a severe level of anxiety.<sup>10</sup>

The results of Heriani's research (2016) at the Tanjung Agung Health Center, Ogan Komering Ulu

Regency, showed that the education of the majority of pregnant women was < SMA, which was low at 74.0% (17 respondents). Low majority results as many as 15 people (50.0%). Pregnant women with low schooling or dropping out of school will depend on the mother's intellectual knowledge of pregnancy information so that ignorance will cause fear to the point of experiencing anxiety.

Pregnant women who have a low level of education will be more likely to experience anxiety due to the lack of information obtained about their pregnancy. Pregnant women with low education are also embarrassed to discuss or ask questions about their pregnancy with friends or neighbors who are pregnant as well or to midwives. And this has an impact on the level of anxiety of pregnant women to increase because of feelings of worry about their pregnancy and childbirth later.<sup>11</sup>

This study is similar to the previous research conducted by Said, 2015, which was obtained from 9 respondents of primigravida pregnant women who had more jobs did not experience anxiety, namely as many as 6 people (66.7%), while from 31 respondents of primigravida pregnant women who did not work, more experienced anxiety as many as 16 people (51.6%).<sup>11</sup>

Working mothers will automatically be busy so that their activities take up a lot of time. However, the positive thing is that pregnant women can interact more with the community while working so that they can increase their knowledge about their pregnancy, and also increase their salary and additional income when working diligently..<sup>12</sup>

Based on the results of research on third trimester pregnant women in pregnant women who have low economic status, with income lower than the Minimum Wage moderate anxiety which is as much as 40 thousand (29.4%). In pregnant women who have high economic status as many as 37 people (27.2%) and most experience mild anxiety as many as 15 people (11%).

This research is in line with the research of Said, Kanine and Bidjuni (2015) obtained from 23 pregnant women respondents. Most primigravidas with high economic status do not experience anxiety as many as 20 people (87%). Meanwhile, out of 17 primigravida pregnant women respondents, anxiety would increase as many as 16 people (94.1%).

The results of the research are in line with those conducted by Deswita (2019) that reading the Koran is definitely a cure for all diseases including anxiety, this has been proven in previous research conducted on third trimester pregnant women in the face of labour. Murotal therapy can have the effect of reducing anxiety<sup>13</sup>

According to Al Kaheel (2018) said that Al-Quran therapy has an effect in the form of changes that indicate relaxation or a decrease in tension in the nervous muscles. This therapy is thought to work optimally on the brain, which will stimulate the brain namely neuropeptides, which will provide feedback in the form of pleasure or comfort to someone.<sup>14,15</sup>



## Conclusion

Based on the results of the research conducted, there is a risk factor relationship between age, education level, occupation, economic factors, parity, religion, spiritual activities with the anxiety level of third trimester pregnant women. However, there is no significant relationship between environmental status and anxiety in pregnant women.

## Conflicts of Interest

There is no conflict of interest

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