



## Comparison of Anxiety Levels Between Primigravida and Multigravida Pregnant Women in the Working Area of Bola Community Health Center, Sikka Regency

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### ABSTRACT

**Background:** Anxiety during pregnancy is a common mental health concern arising from physiological and psychological changes that may adversely affect both maternal and fetal well-being. Primigravida women may experience heightened anxiety due to their first exposure to pregnancy, whereas anxiety among multigravida women may be shaped by previous pregnancy experiences. Anxiety that is not adequately managed during pregnancy may result in significant physical and psychological consequences, including prolonged labor, preeclampsia, postpartum depression, and developmental impairments in the infant.

**Objective:** This study aimed to compare anxiety levels between primigravida and multigravida pregnant women in the working area of Bola Community Health Center Sikka Regency.

**Methods:** This quantitative study employed an analytical observational design with a cross-sectional approach. Stratified random sampling was used to recruit 40 pregnant women, consisting of 18 primigravida and 22 multigravida participants. Data were analyzed using the Shapiro–Wilk test for normality and the Mann–Whitney test for group comparison.

**Results:** No significant difference in anxiety levels was observed between primigravida and multigravida participants, with p-value 0.095 ( $p > 0.05$ ).

**Conclusion:** Anxiety levels did not differ significantly between primigravida and multigravida pregnant women in the working area of Bola Community Health Center Sikka Regency.

**KEYWORDS:** Anxiety, pregnancy, primigravida, multigravida.

### INTRODUCTION

Pregnancy is a developmental stage in a woman's life that can evoke feelings of joy as well as psychological pressure and challenges, arising from various conflicts experienced before and during pregnancy.<sup>1</sup> Anxiety is a normal condition experienced by individuals when facing stress or intense emotions, however excessive anxiety may lead to mental disorders.<sup>2</sup> Pregnant women are more vulnerable to mental health problems due to the numerous changes occurring within their bodies.<sup>3</sup> If anxiety during pregnancy is not adequately managed, it can result in psychological and physical consequences for both the mother and the fetus.<sup>4,5</sup> These consequences include preeclampsia, prolonged labor, postpartum depression, low birth weight, or impaired growth and development of the infant.<sup>4</sup>

Data from the World Health Organization (WHO) indicate that approximately 10% of pregnant women and 13% of postpartum women worldwide experience mental disorders, particularly depression. WHO also reports that anxiety levels are higher in developing countries, reaching 15.6% during pregnancy and 19.8% after childbirth. In severe cases, maternal suffering may lead to suicide and endanger the newborn.<sup>6</sup>



Primigravida women actively prepare themselves to face childbirth. Anxiety and fear commonly arise due to lack of knowledge and experience. In contrast, anxiety in multigravida women may be associated with unpleasant experiences during previous pregnancies.<sup>2</sup>

A study conducted by Arikalang et al. (2023) showed that pregnant women experience varying levels of anxiety with statistically significant results.<sup>2</sup> Another study by Hidayah et al. (2020) reported a significant difference using an independent t-test.<sup>7</sup> These findings contradict those of Iqbal et al. (2015), who reported anxiety among pregnant women but found no statistically significant difference.<sup>4</sup> Similarly, Prayitno et al. (2017) reported no significant difference in anxiety levels between primigravida and multigravida women in facing childbirth.<sup>8</sup>

To date, no similar research has been conducted at Bola Public Health Center. Most previous studies were carried out in urban areas with better access to health facilities. Therefore, this study is relevant to fill the research gap by examining a semi rural population with limited access to health information. This study aims to compare anxiety levels between primigravida and multigravida pregnant women in the working area of Bola Public Health Center, Sikka Regency.

**METHODS**

This study employed a cross-sectional analytical observational design. Ethical approval was obtained with approval number 004249/KEPK FKM UNDANA/2025. Sampling was conducted using stratified random sampling, resulting in 40 pregnant women consisting of 18 primigravida and 22 multigravida participants who met the inclusion and exclusion criteria.

The research instrument consisted of 25 Likert-scale statements adapted from the Zung Self-Rating Anxiety Scale (ZSAS) and the Pregnancy-Related Anxiety Questionnaire-Revised 2 (PRAQ-R2), which were re-tested for validity and reliability. Data analysis included univariate and bivariate analyses using the Shapiro–Wilk test and the Mann–Whitney test.

**RESULTS**

**Table 1. Respondent Characteristics**

Characteristics	Gravidity				
	Primigravida		Multigravida		
	Frequency n=40	Percentage (%)	Frequency n=40	Percentage (%)	
Age (years)	≤ 20	4	22.2	-	-
	21-35	14	77.8	16	72.7
	> 35	-	-	6	27.3
Total	18	100.0	22	100.0	
Education	Elementary School	6	33.3	7	31.8
	Junior High School	3	16.7	6	27.3
	Senior High School	3	16.7	8	36.4
	Bachelor’s degree	6	33.3	1	4.5
	Total	18	100.0	22	100.0
Occupation	Houswife	13	72.2	21	95.5
	Employee	1	5.6	-	-
	Teacher	3	16.7	1	4.5
	Nurse	1	5.6	-	-
Total	18	100.0	22	100.0	



<b>Gestational Age</b>	Trimester I	3	16.7	4	18.2
	Trimester II	10	55.6	11	50.0
	Trimester III	5	27.8	7	31.8
<b>Total</b>		18	100.0	22	100.0

Based on tabel, most respondents in both primigravida and multigravida groups were aged 21–35 years. In the primigravida group, the highest educational levels were elementary school and bachelor’s degree (33.3%), whereas in the multigravida group, most respondents had completed senior high school (36.4%). The majority of respondents in both groups were housewives, and most pregnancies were in the second trimester.

**Univariate Analysis**

**Table 2. Distribution of Anxiety Levels among Primigravida Pregnant Women**

Anxiety Level	Score Range	Frequency	Percentage
Normal	≤ 43	11	61.1%
Mild	44 – 56	4	22.2%
Moderate	57 – 68	3	16.7%
Severe	69 – 81	0	0%
Extreme (Panic)	≥ 82	0	0%
<b>Total</b>	25 – 100	0	0%
<b>Total</b>		<b>18</b>	<b>100%</b>

As shown in the table, most respondents exhibited normal anxiety levels (61.1%), followed by mild anxiety (22.2%) and moderate anxiety (16.7%). No primigravida pregnant women were identified with severe or extreme (panic) anxiety. Overall, these results demonstrate that anxiety among primigravida pregnant women in the working area of Bola Public Health Center, Sikka Regency, is predominantly within the normal to mild range, with only a limited proportion experiencing moderate anxiety.

**Table 3. Distribution of Anxiety Levels among Multigravida Pregnant Women**

Anxiety Level	Score Range	Frequency	Percentage
Normal	≤ 43	15	68.2%
Mild	44 – 56	5	22.7%
Moderate	57 – 68	1	4.5%
Severe	69 – 81	1	4.5%
Extreme (Panic)	≥ 82	0	0%
<b>Total</b>	25 – 100	0	0%
<b>Total</b>		<b>22</b>	<b>100%</b>

Based on the table, the majority of respondents were classified in the normal category, totaling 15 individuals (68.2%), followed by 5 respondents (22.7%) in the mild category, 1 respondent (4.5%) in the moderate category, and 1 respondent (4.5%) in the severe category. No multigravida pregnant women were classified as having extreme (panic) anxiety. These findings indicate that anxiety among multigravida pregnant women generally falls within the normal category, although a small proportion experience mild to severe anxiety.



Table 4. Distribution of Anxiety Levels among Primigravida Pregnant Women by Characteristics

Characteristics	Anxiety Level								Total	
	Normal		Mild Anxiety		Moderate Anxiety		Severe Anxiety			
	Freq. n=18	(%)	Freq. n=18	(%)	Freq. n=18	(%)	Freq. n=18	%		
Age (years)	≤ 20	2	50	-	-	2	50	-	-	4
	21-35	9	64.3	4	28.6	1	7.1	-	-	14
	> 35	-	-	-	-	-	-	-	-	-
<b>Total</b>										<b>18</b>
Education	Elementary School	4	66.7	2	33.3	-	-	-	-	6
	Junior High School	1	33.3	-	-	2	66.7	-	-	3
	Senior High School	1	33.3	1	33.3	1	33.3	-	-	3
	Bachelor's degree	5	83.3	1	16.7	-	-	-	-	6
<b>Total</b>										<b>18</b>
Occupation	Houswife	7	53.8	3	23.1	3	23.1	-	-	13
	Employee	1	100	-	-	-	-	-	-	1
	Teacher	2	66.7	1	33.3	-	-	-	-	3
	Nurse	1	100	-	-	-	-	-	-	1
<b>Total</b>										<b>18</b>
Gestational Age	Trimester I	2	66.8	1	33.3	-	-	-	-	3
	Trimester II	5	50	2	20	3	30	-	-	10
	Trimester III	4	80	1	20	-	-	-	-	5
<b>Total</b>										<b>18</b>

Table 5. Distribution of Anxiety Levels among Multigravida Pregnant Women by Characteristics

Characteristics	Anxiety Level								Total	
	Normal		Mild Anxiety		Moderate Anxiety		Severe Anxiety			
	Freq. n=18	(%)	Freq. n=18	(%)	Freq. n=18	(%)	Freq. n=18	%		
Age (years)	≤ 20	-	-	-	-	-	-	-	-	-
	21-35	4	56.7	-	-	1	16.7	1	16.7	6
	> 35	11	68.8	5	31.3	-	-	-	-	16
<b>Total</b>										<b>22</b>
Education	Elementary School	5	71.4	1	14.3	-	-	1	14.3	14.3
	Junior High School	5	83.3	-	-	1	16.7	-	-	6
	Senior High School	4	50	4	50	-	-	-	-	3
	Bachelor's degree	1	100	-	-	-	-	-	-	1
<b>Total</b>										<b>22</b>
Occupation	Houswife	14	66.7	5	23.8	1	4.8	1	4.8	21
	Employee	-	-	-	-	-	-	-	-	-
	Teacher	1	100	-	-	-	-	-	-	1
	Nurse	-	-	-	-	-	-	-	-	-



<b>Total</b>										<b>22</b>
<b>Gestational Age</b>	Trimester I	3	75	1	25	-	-	-	-	4
	Trimester II	6	54.5	3	27.3	1	9.1	1	9.1	11
	Trimester III	6	85.7	1	14.3	-	-	-	-	7
<b>Total</b>										<b>22</b>

**Bivariate Analysis**

**Table 6. Results of the Mann–Whitney Test**

Variabel	Gravida	N	Mean Rank	Z	P Value
Anxiety Level	Primigravida	18	23.94	-1.688	0.091
	Multigravida	22	17.68		

Based on the results of the non-parametric Mann–Whitney test, the mean rank was 23.94 in the primigravida group and 17.68 in the multigravida group. The test yielded a Z value of -1.688 with a p-value of 0.091 ( $p > 0.05$ ). These results indicate that there is no statistically significant difference in anxiety levels between primigravida and multigravida pregnant women in the working area of Bola Public Health Center, Sikka Regency.

**DISCUSSION**

The purpose of this study was to determine whether there is a difference in anxiety levels between primigravida and multigravida pregnant women in the working area of Bola Public Health Center, Sikka Regency. Inferential analysis using the Mann–Whitney test showed a p-value of 0.091 ( $> 0.05$ ). These results indicate that there is no statistically significant difference in anxiety levels between primigravida and multigravida pregnant women, although differences in anxiety levels were observed within each gravidity group. This finding is consistent with the study conducted by Iqbal et al. (2015), which reported differences in the percentage of anxiety levels, with 36.76% of primigravida and 37.43% of multigravida pregnant women experiencing anxiety; however, no statistical significance was found based on the statistical analysis.<sup>4</sup>

The findings of this study are consistent with the study conducted by Shakarami et al. (2021) in Iran, which demonstrated that although primigravida women tend to experience higher fear of childbirth compared to multigravida women, overall anxiety levels did not differ significantly between the two groups. This may be explained by the fact that gravidity is not the sole determinant of anxiety among pregnant women; rather, other factors, such as psychosocial conditions and family support, may play a more dominant role.<sup>9</sup> A study conducted by Jannah et al. (2025), which examined the relationship between parity and maternal anxiety prior to childbirth, reported that primiparous pregnant women had higher anxiety levels, with 50% experiencing anxiety, compared to 31.3% among multiparous women. However, the Chi-square test showed no statistically significant association between parity and maternal anxiety.<sup>10</sup> This finding is consistent with the characteristics of the present study, in which some multigravida pregnant women were classified as having severe anxiety, indicating that previous childbirth experience does not necessarily make women more relaxed in facing subsequent pregnancies.<sup>10</sup> In addition, external factors may influence anxiety among pregnant women, such as environmental conditions and family support. A study by Asmariyah et al. (2021), which examined anxiety among pregnant women during the COVID-19 pandemic in Bengkulu City, found that anxiety was experienced by nearly all pregnant women, both primigravida and multigravida, at relatively similar levels. This finding indicates that external factors, such as environmental stressors during the pandemic, influenced anxiety levels among pregnant women.<sup>11</sup>

**CONCLUSION**

1. Among primigravida pregnant women, 22.2% were aged  $\leq 20$  years, 77.8% were aged 21–35 years, and none were aged  $> 35$  years. In terms of educational level, 33.3% had completed elementary school, 16.7% junior high school, 16.7% senior high school, and 33.3% held a bachelor’s degree. Regarding occupation, 72.2% were housewives, 5.6% were employees, 16.7% were teachers, and 5.6% were nurses. Based on gestational age, 16.7% of primigravida women were in the first trimester, 55.6% in the second trimester, and 27.8% in the third trimester.



Among multigravida pregnant women, none were aged  $\leq 20$  years; 72.7% were aged 21–35 years and 27.3% were aged  $>35$  years. Educational attainment ranged from elementary school (31.8%), junior high school (27.3%), senior high school (36.4%), to bachelor's degree (4.5%). The majority of multigravida women were housewives (95.5%), while 4.5% were teachers. Based on gestational age, 18.2% were in the first trimester, 50.0% in the second trimester, and 31.8% in the third trimester.

2. In the working area of Bola Public Health Center, Sikka Regency, 61.1% of primigravida pregnant women were classified as having no anxiety or normal anxiety levels, 22.2% had mild anxiety, and 16.7% had moderate anxiety.

3. In the working area of Bola Public Health Center, Sikka Regency, 68.2% of multigravida pregnant women were classified as having no anxiety or normal anxiety levels, 22.7% had mild anxiety, 4.5% had moderate anxiety, and 4.5% experienced severe anxiety.

4. There was no statistically significant difference in anxiety levels between primigravida and multigravida pregnant women in the working area of Bola Public Health Center, Sikka Regency.

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