

Effectiveness of Tailored Nursing Intervention on Stress and Anxiety among Primigravida Mothers Attending OBG OPD's of Selected Hospitals of Bagalkot

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Abstract

Original Research Article

Background: Pregnancy and childbirth are some of the most significant, exciting and scary experiences that a woman will experience in her lifetime. Any stress and emotional changes during pregnancy can have long-term adverse effect on herself and her child, and it may interfere with mother-infant attachment and child development. Anxiety can occur at any time during pregnancy, or it may first appear after delivery. **Aims:** 1. To assess stress and anxiety among primigravida mothers. 2. To correlate stress and anxiety scores of primigravida mothers. 3. To evaluate the effectiveness of tailored nursing intervention by comparing pre- and post-test scores. 4. To associate pre-test levels of stress and anxiety with selected socio-demographic and obstetrical variables. **Methods and Material:** Data were collected using Cohen's Perceived Stress Scale and Generalised Anxiety Scale. Analysis was done using descriptive and inferential statistics, including mean percentage distribution, paired "t" test, and chi-square test. **Results:** Pre-test findings revealed that 74% of mothers had high stress and 26% moderate stress, with none reporting low stress. Post-intervention, 86% showed moderate stress, 12% high stress, and 2% low stress. For anxiety, 82% initially had mild anxiety, 14% severe, and 4% moderate, with no minimal level. After the intervention, 60% had moderate anxiety, 38% mild, and 2% severe, with none minimal. **Conclusions:** The study demonstrated that tailored nursing intervention was effective in reducing stress and anxiety among primigravida mothers. It highlights the importance of structured, cost-effective, and evidence-based strategies in maternal care.

Keywords: Primigravida Mothers, Stress, Anxiety, Tailored Nursing Intervention, Socio-Demographic Variables.

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INTRODUCTION

Pregnancy is the privilege of experiencing the god's miracle on earth. It is the stage of joyful anticipation which brings many changes in the body, the emotion and the family life. One can welcome these changes, but they can add new stress to the life which can have both beneficial and negative effects [1].

Pregnancy and childbirth are some of the most significant, exciting and scary experiences that a woman will experience in her lifetime. The experiences and mental health of the woman during pregnancy and throughout the post-pregnancy period are of utmost importance for the well-being of both the mother and her child [2].

Pregnancy is a difficult time in a woman's life, as she changes from daughter to mother a couple of times. Becoming a mother necessitates significant self-reconstruction. Pregnancy is not a disease, but it is a health risk in which all maternal systems are significantly altered to allow for the survival and development of the conceptus. Still, these alterations can also result in ailments such as morning sickness, heartburn and constipation [3].

Many primigravidae have reported experiencing various levels of pain during labor and high levels of anxiety about the labor process and its outcomes. Anxiety escalating to fear is a common issue related to labor, especially among primigravidae [4].

Antenatal and prenatal are often used interchangeably to describe the care provided to pregnant women. However, these terms have different meanings. Antenatal care refers to the care provided to a woman during pregnancy, while prenatal care refers to the care provided to a woman and her unborn child. Prenatal care includes antenatal care, but also includes care provided to the fetus, such as ultrasound scans and fetal monitoring.

MATERIAL AND METHODS

Study Design and Participants

Present study was a pre-experimental study conducted between July 2025 to Dec 2025. A purposive sample of 50 primigravida mothers with stress and anxiety coming for checkup at OBG OPD of HSK Hospital, District Government Hospital Bagalkot were selected for the study. Primigravida mothers who were between 20-35 years of age and willing to participate were included in the study. Primigravida mothers who were having severe stress and anxiety were excluded because tailored nursing intervention alone are not sufficient to manage their condition and they are required advanced medical and psychological treatment.

Instruments

Description of Tool

In the present study data was collected by researcher herself after obtaining permission from concerned authority and informed consent from subjects in the following sections:

Section A: Sociodemographic and obstetrical profile of primigravida mothers.

Section B: Cohens Perceived stress scale

It is a 10 item scale each item is scored on 0-4 Likert scale. Total score ranges between 0-40. Higher score indicates higher level of stress.

Section C: Generalized anxiety scale (GAD)-7

It is a 7 item scale each item is scored on 0-3 Likert scale. Total score ranges between 0-21. Higher score indicates higher level of anxiety.

SCORING OF PERCIEVED STRESS SCALE:

Individual scores on the PSS can range from 0 to 40 with higher scores indicating higher perceived,

- Scores ranging from 0-13 would be considered low stress.
- Scores ranging from 14-26 would be considered moderate stress.
- Scores ranging from 27-40 would be considered high perceived stress.

SCORING OF GENERALIZED ANXIETY SCALE:

1. 0-4: minimal anxiety.
2. 5-9: mild anxiety.
3. 10-14: moderate anxiety.
4. >15: severe anxiety.

Socio-Demographic Variables and Clinical Characteristics

Socio-demographic and obstetrical variables included age in years, education, religion, type of family, occupation, husband education, family monthly income, place of residence, food habits and planned/unplanned pregnancy?

Data Collection Procedures

Prior permissions were taken from relevant institutions before the beginning of data collection procedure. The study participants were identified during the study period at HSK Hospital, District Government Hospital Bagalkot. Every primigravida mother with stress and anxiety who fulfilled the inclusion criteria was approached for data collection. Consent was obtained by the participants underwent the structured questionnaire which lasted approximately for 20 to 30 minutes. All the information collected was based on patient's self report.

Data Analysis

The investigator analysed the data using descriptive and inferential statistics. Descriptive statistics (frequency, percentage, mean, and standard deviation) were used to describe socio-demographic and obstetrical variables and summarize stress and anxiety levels. Inferential statistics included paired t-test to compare pre- and post-test scores, chi-square test to find associations with selected variables, and Karl Pearson's correlation coefficient to assess the relationship between stress and anxiety scores.

RESULTS

Section-I: Description of socio-demographic characteristics of sample.

Table 5.1: Frequency and percentage distribution of socio demographic characteristics of sample N=50

VARIABLES	NO OF RESPONDERS	PERCENTAGE (%)
AGE IN YEARS		
21-25 years	21	42%
26-30 years	14	28%
31-35 years	15	30%
EDUCATION		
No formal education	7	14%
Primary education	18	36%
Secondary education	10	20%
Degree	15	30%
RELIGION		
Hindu	19	38%
Muslim	18	36%
Christian	4	8%
Others	9	18%
TYPE OF FAMILY		
Joint family	17	34%
Nuclear family	33	66%
OCCUPATION		
House maker	24	48%
Government job	0	0%
Private job	8	16%
Other	18	36%
HUSBAND EDUCATION		
No formal education	8	16%
Primary education	8	16%
Secondary education	15	30%
Degree	19	38%
FAMILY MONTHLY INCOME		
< 10000	8	16%
Rs. 10001 to 15000	30	60%
Rs. 15001 to 20000	11	22%
> 20000	1	2%
PLACE OF RESIDENCE		
Rural	22	44%
Urban	28	56%
FOOD HABITS		
Vegetarian	17	34%
Eggetarian	13	26%
Mixed	20	40%
PLANNED/UNPLANNED PREGNANCY?		
Planned	18	36%
Unplanned	32	64%

This section deals with the description of sample characteristics and is explained in frequency and percentage and presented in graphs.

Section-II: Assessment of level of stress and anxiety among primigravida mothers attending OBG OPD'S of selected hospitals of Bagalkot.

Table 5.2: Percentage wise distribution of primigravida mothers attending OBG OPD'S of selected hospitals of Bagalkot according to the level of stress in pre-test scores N=50

Test	Levels of stress	Number (F)	Percentage (%)
Pre-test stress level scores.	Low stress level	0	0%
	Moderate stress level	13	26%
	High perceived stress	37	74%

Table 5.3: Percentage wise distribution of primigravida mothers attending OBG OPD'S of selected hospitals of Bagalkot according to the level of stress in post-test scores N=50

Test	Levels of stress	Number (F)	Percentage (%)
Post-test stress level scores.	Low stress level	1	2%
	Moderate stress level	43	86%
	High perceived stress	6	12%

Table 5.4: Percentage wise distribution of primigravida mothers attending OBG OPD'S of selected hospitals of Bagalkot according to the level of anxiety in pre-test scores N=50

Test	Levels of anxiety	Number (F)	Percentage (%)
Pre-test anxiety level scores.	Minimal level anxiety	0	0%
	Mild level anxiety	2	4%
	Moderate level anxiety	41	82%
	Severe level anxiety	7	14%

Table 5.5: Percentage wise distribution of primigravida mothers attending OBG OPD'S of selected hospitals of Bagalkot according to the level of anxiety in post-test scores N=50

Test	Levels of anxiety	Number (F)	Percentage (%)
Post-test anxiety level scores.	Minimal level anxiety	0	0%
	Mild level anxiety	30	60%
	Moderate level anxiety	19	38%
	Severe level anxiety	1	2%

Section-III: To correlate stress and anxiety scores of primigravida mothers.

Table 5.6: Description of correlation between stress and anxiety among primigravida mothers N=50

Variable	Mean	Median	Range	Sd	R _{vaule}	Significance
STRESS	28.2	28	10	2.607	0.1751	Not Significant at 0.05 level of significance
ANXIETY	12.9	13	7	1.445		

Section -IV: To evaluate the effectiveness of tailored nursing intervention by comparing the pre and post-test scores of stress and anxiety among primigravida mothers.

Table 5.7: Percentage wise distribution of primigravida mothers attending OBG OPD'S of selected hospitals of Bagalkot according to level of stress in pre-test and post-test scores N=50

Levels of stress	Pre-test score		Post-test score	
	No. of respondents	Percentage (%)	No. of respondents	Percentage (%)
Low stress level	0	0%	1	2%
Moderate stress level	13	26%	43	86%
High perceived stress	37	74%	6	12%
Total	50	100%	50	100%

Table 5.8: Effectiveness of tailored nursing intervention by comparing the pre and post-test scores of stress among primigravida mothers N=50

Test	Mean	Median	Range	Sd	Table Value	P-Value	Significance
PRE-TEST	28.2	28	10	2.607	9.84617	<.00001.	Significant
POST-TEST	20.02	18	21	5.19			

Table 5.9: Percentage wise distribution of primigravida mothers attending OBG OPD'S of selected hospitals of Bagalkot according to level of anxiety in pre-test and post-test scores N=50

Levels of anxiety	Pre-test score		Post-test score	
	No. of respondents	Percentage (%)	No. of respondents	Percentage (%)
Minimal level anxiety	0	0%	0	0%
Mild level anxiety	2	4%	30	60%
Moderate level anxiety	41	82%	19	38%
Severe level anxiety	7	14%	1	2%
Total	50	100%	50	100%

Table 5.10: Effectiveness of tailored nursing intervention by comparing the pre and post-test scores of anxiety among primigravida mothers N=50

Test	Mean	Median	Range	Sd	Table Value	P-Value	Significance
PRE-TEST	12.9	13	7	1.445	9.56522	<.00001.	Significant
POST-TEST	8.98	9	11	2.477			

Section V: To associate the pre-test level of stress among primigravida mothers with their selected socio demographic and obstetrical variables.

Table 5.11: Associate the pre-test level of stress among primigravida mothers with their selected socio demographic and obstetrical variables N=50

SI.NO	Socio-demographic variables	DF	Chi-square value	Table value	P-value	Significance
1	Age in years	2	2.293	5.84	0.3177	Not significant
2	Education	3	12.863	7.84	0.0049	Significant
3	Religion	3	1.1703	7.84	0.7601	Not significant
4	Type of family	1	0.2928	3.84	0.5884	Not significant
5	Occupation	3	12.2336	7.84	0.0066	Significant
6	Husband education	3	1.337	7.84	0.7204	Not significant
7	Family monthly income	3	13.9955	7.84	0.0029	Significant
8	Place of residence	1	1.2042	3.84	0.2725	Not significant
9	Food habits	2	2.2522	5.84	0.3243	Not significant
10	Any history of miscarriage?	1	0.5247	3.84	0.4688	Not significant

Table 5.12: Associate the pre-test level of anxiety among primigravida mothers with their selected socio demographic and obstetrical variables N=50

SI.NO	Socio-demographic variables	DF	Chi-square value	Table value	P-value	Significance
1	Age in years	2	0.22666	5.84	0.8929	Not significant
2	Education	3	15.5744	7.84	0.0014	Significant
3	Religion	3	7.029	7.84	0.0710	Not significant
4	Type of family	1	1.964	3.84	0.1611	Not significant
5	Occupation	3	1.004	7.84	0.8003	Not significant
6	Husband education	3	1.18474	7.84	0.7567	Not significant
7	Family monthly income	3	17.9926	7.84	0.0004	Significant
8	Place of residence	1	2.2968	3.84	0.1296	Not significant
9	Food habits	2	2.3249	5.84	0.3127	Not significant
10	Any history of miscarriage?	1	3.6281	3.84	0.0568	Not significant

DISCUSSION

This pre-experimental study included a sample of 50 primigravida mothers attending OBG OPD'S of HSK hospital and Government District Hospital.

Findings revealed that, Correlation between stress and anxiety shows that there is positive correlation between stress and anxiety among primigravida mothers with $r=0.1751$ and P value at 0.7073 ($\alpha=0.05$).

Levels of stress score wise comparison of primigravida mothers in pre-test and post-test scores reveals that the following results. In pre-test scores, out of 50 primigravida mothers' highest percentage (74%) of primigravida mothers had high perceived stress, (26%) of primigravida mothers had moderate stress levels none of the primigravida mothers had low stress level by using Perceived Cohen's Stress scale. However, after tailored nursing intervention (post-test) highest percentage (86%) of primigravida mothers had moderate level stress, (12%) of primigravida mothers had high perceived stress

levels, (2%) of primigravida mothers had low stress level.

The pretest mean score of stress was 28.2 ± 2.607 and the post-test mean score was 20.02 ± 5.19 . The calculated paired 't' test value of $t = 9.84617$ which was found to be statistically significant at p.

Levels of anxiety score wise comparison of primigravida mothers in pre-test and post-test scores reveals that the following results. In pre-test scores, out of 50 primigravida mothers' OPD'S of selected hospitals of Bagalkot in pre-test reveals that out of 50 primigravida mothers' highest percentage (82%) of primigravida mothers had mild level anxiety, (14%) of primigravida mothers had severe level anxiety, (4%) of primigravida mothers had moderate level anxiety and none of the primigravida mothers had minimal level of anxiety by using Generalized anxiety scale. However, after tailored nursing intervention (post-test) highest percentage (60%) of primigravida mothers had moderate level anxiety, (38%) of primigravida mothers had mild level anxiety, (2%) of primigravida mothers had severe level anxiety and none of the primigravida mothers had minimal level of anxiety.

The pretest mean score of anxiety was 12.9 ± 1.445 and the post-test mean score was 8.98 ± 2.477 . The calculated paired 't' test value of $t = 9.56522$ which was found to be statistically significant at p.

The pre-test levels of stress the socio-demographic variables education ($\chi^2=12.863$, $p=0.0049$) and occupation ($\chi^2=12.2336$, $p=0.0066$) and family monthly income ($\chi^2=13.9955$, $p=0.0029$) had shown statistically significant association with pretest level of stress among primigravida mothers at p.

Hence, the **H3** is accepted for the demographic variable that was education, occupation and family monthly income was significantly associated with level of stress among primigravida mothers at p.

The pre-test levels of anxiety the socio-demographic variables education ($\chi^2=15.5744$, $p=0.0014$) and family monthly income ($\chi^2=17.9926$, $p=0.0004$) had shown statistically significant association with pretest level of anxiety among primigravida mothers at p.

Hence, the **H3** is accepted for the demographic variable that was education, family monthly income was significantly associated with level of anxiety among primigravida mothers at p.

Significant associations between stress and anxiety levels were found with education, occupation,

and family income. Tailored interventions proved effective in reducing stress and anxiety among primigravida mothers.

Limitations

The age group of the mothers limited to 20-35 years and is limited only to primigravida mothers. The study was limited to one week.

Recommendations

The similar study can be conducted with large samples. A multicentric research study can be conducted. The tailored nursing intervention can be compared with other nursing intervention in reduction of stress and anxiety among primigravida mothers. The similar study can be conducted with control group. The True experimental research study can be conducted.

CONCLUSIONS

The study found that tailored nursing interventions effectively reduced stress and anxiety levels among primigravida mothers. Chi-square analysis showed significant associations between stress and sociodemographic factors like education, occupation, and family income, and between anxiety and education and family income.

Ethical Clearance: Ethical clearance was obtained from the institutional ethical committee of BVVS Sajjalashree Institute of Nursing Sciences, Bagalkot.

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Conflict of Interest: Nil

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