

A Study to Assess the Stress among Antenatal Women Admitted for Safe Confinement at a Tertiary Level Hospital, Thiruvananthapuram, Kerala

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ABSTRACT

Aim: To assess stress among antenatal women admitted for safe confinement and to find stress level and related factors for stress. Identifying the level of stress will help to develop interventions to reduce the stress.

Objectives:

- i) To find out the level of stress experienced by antenatal women.
- ii) To find out the association between level of stress and selected socio-demographic and clinical data of antenatal women.

Method: A quantitative research approach-descriptive cross-sectional survey design was adopted. 60 samples were selected for the study by using purposive sampling technique.

Results: It is identified that 1% of selected antenatal women had no stress, 73% had mild stress, 25% had moderate stress and 1% had severe stress. After calculation of chi square values, it is identified that there is association between stress level and selected sociodemographic variables (occupation) and also there is significant association between stress level and clinical data (parity).

Conclusion: Majority of women in their antenatal period experience varying stress. 73.33% of them had mild stress where as 26.66% experienced moderate stress. Extreme levels of stress including no stress and severe stress were very rare i.e., 1%. Multiple factors have association with their stress level. Present

study documented significant association with parity and occupational status of women.

Keywords: stress, antenatal women, safe confinement.

INTRODUCTION

Stress is a complex genetically determined pattern of response of the human physiology to a demanding situation. A women's experience of pregnancy and childbirth is almost likely affecting her role as mother. Any stress and emotional changes during pregnancy have long term address effects on herself and her child and it may interfere with mother infant attachment and child development. The maternal stress during antenatal period can have specific effect on cognitive and brain development outcome of foetus. The complex situation of stress during antenatal period affects the physiological and physical health in many ways in antenatal women. The present study aimed to assess stress among antenatal women admitted for safe confinement in the antenatal wards of Sree Avittom Thirunal Hospital Thiruvananthapuram, Kerala.

LITERATURE REVIEW

Pregnancy is recognized as a stressful event in a woman's life that needs

enormous psychological adjustment. During pregnancy, the hormonal responses of both the hypothalamic pituitary adrenal (HPA) axis and the sympathetic nervous system to emotional and physical stressors are severely attenuated during pregnancy.¹ Moreover, pregnant women will encounter mixed feelings of happiness, insecurity, and fear that lead to a great desire for support from their partner and/or family. The interrelation of these factors leads to an imbalance between allostatic stress, the demands of life, and individual adaptive capacity that pregnant women perceive as stress.¹

Stress is defined as the feelings or thoughts that an individual has about how much a stress event or situation occurs at a given time or over a given period.² Antenatal stress during pregnancy is common, with 78% experiencing low to moderate and 6% high stress.³ Prevalence of stress in pregnancy varies from 11.6% to 46.7%.⁴⁻⁷ However, there have been few worldwide reports of prevalence of antenatal stress.

Stress during pregnancy is clearly known to be associated with poor obstetric outcomes, including preterm birth, preterm delivery and low birthweight.⁸⁻¹¹ Moreover, maternal stress during pregnancy can affect iron transfer and the iron status of infants at delivery, resulting in lower iron stores at birth, low erythrocyte iron, increasing the likelihood of Stage 1 iron deficiency at 1 year of age.¹² In addition, stress also has a strong negative impact on the quality of life of pregnant women.¹³

There have been few reports of associated factors of antenatal stress despite the high prevalence and negative effects on maternal and neonatal health. Previous reports of factors associated with antenatal stress were varied and inconclusive, such as gravida, gestational age, family income, pregnancy intention, husband's employment status, medical co-morbidities, and family support.¹⁴⁻¹⁵ The variety of these factors depends on population, sample size, stress-screening tool, and cultural context.

Another study conducted at Manipal University to assess the stress among antenatal women in India revealed that there is no or mild stress level among antenatal women 107 (66.9%) and moderate to severe stress in 53 (33.3%) of them. A Statistically significant association was observed for gravida, education and monthly family income of antenatal women.¹⁶

MATERIALS & METHODS

Research Approach: A quantitative research approach-descriptive cross-sectional survey design was adopted.

Setting of the Study: The study was conducted in antenatal wards of Sree Avitham Thirunal Hospital, Thiruvananthapuram, Kerala. Sree Avittam Thirunal Hospital is a tertiary care referral hospital where most of the antenatal mothers are referred cases from community. As most of the antenatal mothers are referred cases, researchers assume that, they possess a high level of stress.

Sampling Technique and Sample Size: Purposive sampling technique was used in this study to select the antenatal women and present study sample size consists of 60 antenatal women admitted in antenatal wards.

Sampling Criteria:

- **Inclusion Criteria:** All Antenatal women admitted in Sree Avittam Thirunal Hospital for safe confinement in all trimester irrespective of their age, gestation, parity.
- **Exclusion Criteria:** Women with history of Psychiatric illness, women who didn't know the Malayalam language.

Data Collection Techniques: The tools used in the study were interview schedule to assess socio-demographic and clinical data and a stress assessment scale.

Tool 1: Interview schedule to assess socio-demographic and clinical data. It was done by two parts

- **Part-1: Socio-demographic data**

It includes variables like age, education, income, occupation, religion,

marital status, type of marriage and place of residence.

Part-2: Clinical data

It includes variables like weeks of pregnancy, number of antenatal visits, frequency, minor ailments of pregnancy, family history of illness, presence of co-morbidities history of hospitalization and reason, presence of obstetric complications.

Tool 2: Stress Assessment Scale by Dr. Ambreen Kazi.

A-Z Stress Scale is a standardized stress scale for pregnant women in South Asian Context developed by Dr. Ambreen Kazi. Permission was obtained from the author. Tool consists of 25 statements with 5-point scale. Maximum score was 120 and minimum score was 0.

Statistical Analysis

The data collected was entered in a Microsoft excel spreadsheet. Continuous

variables were summarized as means and standard deviation, and categorical variables were summarized as percentages. Chi-Square test was used to find out association between stress level and selected socio-demographic variables. A p-value of <0.05 was taken as statistically significant.

RESULT

The data was collected from 60 antenatal women admitted in Sree Avitom Thirunal Hospital, were tabulated, analysed and interpreted using descriptive and inferential statistics. Stress of antenatal women was analysed using mean and standard deviation. Level of stress and its association with social variable were analysed in terms of chi-square test. The results have been presented below in tabular and graphical forms.

Section 1: Socio-demographic data of antenatal women.

Table 1: Socio-demographic characteristics of antenatal women (n=60)		
Age	Number	Percentage (%)
≤20	11	18
21-25	16	27
26-30	21	35
≥31	12	20
Educational Status		
Primary education	0	0
Schooled	13	21.67
Higher secondary education	25	41.67
Degree/Diploma	20	33.33
Professional	2	3.33
Occupation		
Home maker	50	83.33
Business	0	0
Private employee	4	6.67
Manual labour	1	1.67
Skilled labour	0	0
Office Job	5	8.33
Monthly Income		
Below 1000	53	88.33
1000-5000	4	6.67
Above 5000	3	5
Family Structure		
Nuclear family	29	48.33
Joint family	31	51.67
Religion		
Hindu	39	65
Christian	9	15
Muslim	12	20
Marriage		
Arranged	53	88.33
Self-selected	7	11.67
Type of Marriage		
Consanguineous	8	13.33
Non-consanguineous	52	86.67

Table 1 continued...		
Marital Status		
Stays with Partner	52	86.67
Partner Abroad	7	11.67
Divorced	1	1.67
Locality		
Corporation	7	11.67
Municipality	4	6.67
Panchayat	49	81.67

Section 2: Clinical data of antenatal women

Table 2: Clinical data of antenatal women (n=60)		
Gestational Age	Number	Percentage (%)
First trimester	2	3.33
Second trimester	9	15
Third trimester	49	81.67
Parity		
Primigravida	36	60
Multigravida	24	40
Antenatal Visit		
One	3	5
Two	2	3.33
Three	2	3.33
Above three	53	88.33
Frequency of antenatal visits		
Regular	28	46.67
Irregular	32	53.33
Gestational problems		
Present	55	83.33
Absent	5	91.67
Family History of Illness		
Diabetes Mellitus	14	23.35
Hypertension	23	38.33
Asthma	4	6.66
Seizure	1	1.66
None	18	30
Complications		
Gestational diabetes mellitus	17	26.60
Gestational hypertension	14	23
Anemia	4	6.60
Bleeding	1	1.60
Polyhydramnios	5	8.30
None	19	33.30
History of Any Abortions		
Present	17	28.40
Absent	43	71.60
Planned Pregnancy		
Planned	57	95
Unplanned	3	5
Type of Delivery Opting		
Vaginal delivery	56	93.33
Caesarean delivery	4	6.67

Section 3: Stress among antenatal women

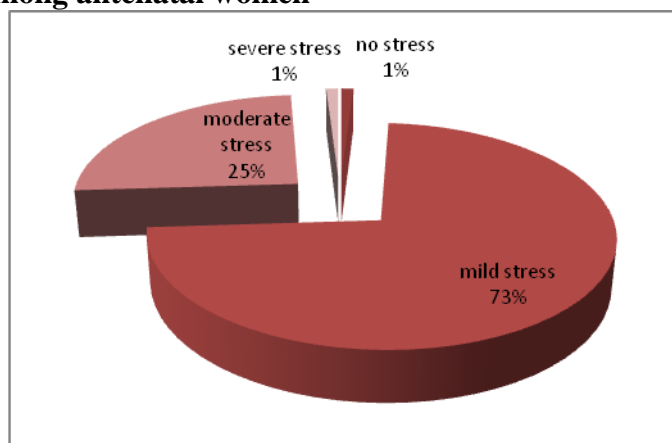


Figure 1: Distribution of mother according to the level of stress.

Above figure shows that 73% had mild stress, 25% had moderate stress, 1% had severe stress and remaining 1% had no stress.

Section 4: Association between stress level and selected socio-demographic and clinical variables

Sl. No	Selected socio demographic data	Degree freedom	Chi square	p. value
1	Age	1	.4155	<0.05
2	Occupation	1	9.6236	<0.05
3	Parity	1	6.517	<0.05
4	Complication	1	3.140	<0.05

Table 3: As the value obtained on test statistics is greater than table value of chi-square for d.f. at 0.05 level of significance, null hypothesis is rejected. There is association between stress during antenatal period and selected socio-demographic variables and clinical variables.

DISCUSSION

Stress during pregnancy may lead to several problems to their mother and unborn child. Stress reacts physically, mentally and emotionally to the various conditions. The present study reveals that only 1% of antenatal woman had no stress, 73.33% had mild stress, 26.66% had moderate stress and remaining 1% had severe stress. Another study conducted by Maria, Pais et al to investigate stress in antenatal women among 160 mothers revealed that 33.1% had moderate to severe level of stress and 66.9% had no to mild level of stress respectively.¹⁷

Our study revealed stress of antenatal women had significant association with their occupation status and parity. A study on antenatal stress showed that antenatal women had moderate to severe stress and stress was significantly associated with gravidity, educational status and monthly family income, and antenatal women who are staying in nuclear family, it may be due to lack of family support.¹⁷

In our study, 81% of mothers were in third trimester, 15% of mothers were in second trimester and remaining 3% were in first trimester. Another study conducted by B Prasad Babu to assess the level of stress during the first, second and third trimester

identified that there is no difference in the level of stress among the pregnant women irrespective of their period of pregnancy.¹⁸

CONCLUSION

Stress during pregnancy is, “the imbalance that antenatal mother feels when she cannot cope with demands, which are shown both behaviourally and physiologically”. The emotions and experiences during antenatal period impinge on her developing foetus. It can arise from various situations like her economic status, lack of knowledge or support, type of work, parity etc. Therefore, measures must be taken during the time of pregnancy like providing psychological support, ensuring regular antenatal check-ups, counselling, family support etc. to reduce the stress among antenatal women.

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