

ASSESSMENT OF ANTENATAL PERCEIVED STRESS AMONG PREGNANT WOMEN AVAILING ANTENATAL CARE AT URBAN HEALTH TRAINING CENTRE IN CENTRAL INDIA: A CROSS SECTIONAL STUDY.

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ABSTRACT

Background: Antenatal stress may have adverse health effects on mothers and their offspring. Perceived stress is the feelings or thoughts that an individual has about how much stress they under at a given point in time or over a given time period. **Aim and Objectives:** To assess the antenatal perceived stress among pregnant women availing antenatal care using Perceived Stress Scale. To study the sociodemographic characteristics of study population. To suggest recommendations based on study findings. **Materials and Methods:** A cross sectional study will be conducted among 270 antenatal women who are attending antenatal OPD of the Urban Health Training Centre in Central India. Data was collected using predesigned questionnaire scheduled after obtaining informed consent. Antenatal Perceived Stress assessed by Perceived Stress Scale. **Results:** Out of total 270 women, 243 (90%) were diagnosed with stress using PSS score >14 in the study. The mean age of women was 28.15 years. There is no any significant association found between sociodemographic variables except socioeconomic class as well as no association between marital factors and perceived stress. No significant association between obstetric factors and perceived stress. **Conclusion:** This research concluded that stress detection and timely counselling along with mental and physical support will mitigate stress and postpartum depression

KEYWORDS

Antenatal care, Perceived Stress Scale, Pregnant women.

INTRODUCTION

Women's mental health during antenatal period has significant effects on successful childbirth, fetal health and lactation. Perceived stress is the feelings or thoughts that an individual has about how much a stress event or situation generates at a given point in time or over a given time period. Prenatal maternal stress results from imbalance between environmental demands and individual resources and leads to increased stress perception and maladaptive coping. Mild stress during antenatal period, is good for optimal development of the fetus, but if it exceeds it may lead to long term effect on the fetus, and alter the development of the fetal nervous system. This occurs via effects on development of the fetal nervous system and alterations in functioning of the maternal and fetal hypothalamic pituitary adrenal (HPA) axes. Stress during pregnancy also associated with spontaneous pregnancy loss, preterm labour, preeclampsia, miscarriage, low birth weight, immune system suppression, excessive nausea and vomiting of pregnancy and higher incidence of caesarean deliveries.

ACOG advocated screening all women for psychosocial stress and other psychosocial issues during each trimester of pregnancy and the postpartum period. Our health care policy has to emphasise the need for greater awareness among the public and healthcare professionals regarding postpartum stress by creating informative sessions and local resources to be made available for the optimal treatment of women suffering from it. At risk mothers have to be contacted and re-assured.

In studies employed in Thailand, South-East Ethiopia and Kathmandu show that the prevalence of perceived stress during pregnancy was 23.6%, 11.6% and 34% respectively. Similarly, the study conducted in Kerala shows that the prevalence of perceived stress during pregnancy is 77.31%.

The study was conducted to assess the antenatal perceived stress among pregnant women availing antenatal care using Perceived Stress Scale and also to study the socio demographic characteristics of study population and to suggest recommendations based on study findings.

MATERIALS AND METHODS

A cross sectional study was carried out in month of January 2022 in Antenatal care OPD of Urban Health Training Centre of Central India. Participants willing to give informed consent irrespective of maternal and gestational age are included in the study. Known case of psychiatric illnesses, ANC with acute/chronic severe illnesses and who refuse to give informed consent are excluded from the study.

Based on the study conducted by Heera Shenoy T et al¹, in Kerala,

India, it was seen that the prevalence of perceived stress among pregnant women as 77.31% and applying suitable formula for cross sectional study sample size came out to be 270. A total of 270 participants included in the study. Data will be collected from Antenatal OPD of Urban Health Training Centre of Central India. A Predesigned proforma will be used for collection of information regarding the socio demographic characteristics of study population. Antenatal perceived stress is assessed using Perceived Stress Scale (PSS)⁵.

PSS is a classic stress assessment instrument, originally developed in 1983. The questions in this scale ask about your feelings and thoughts during last month. Scale consist of total 10 questions. Each question is accompanied by five response categories from never, almost never, sometimes, fairly often and very often. PSS score ranges from 0 to 40. Score 0 to 13 considered as Low Perceived Stress, 14 to 26 considered as Moderate Perceived Stress and score 27 to 40 considered as High Perceived Stress. PSS scores are obtained by reversing responses (e.g., 0=4, 1=3, 2=2, 3=1 and 4=0) to the four positively stated items (items 4, 5, 7, and 8) and then summing across all scale items⁵. The questionnaire takes approximately 5 minutes to complete.

After collecting all the data, data entry was done in MS EXCEL Version 2020 and analyzed by using SPSS version 20. The quantitative data was expressed in terms of mean and standard deviations. Fischer's exact test was applied to observe the differences between proportions. p value <0.05 was considered significant.

RESULTS

Table No.1: Distribution Of Study Participants As Per Sociodemographic Variables.

Socio demographic variables		No.	%
Age of pregnant mother (in years)	≤20	50	18.57
	21-25	54	20.00
	26-30	77	28.57
	31-35	42	15.71
	>35	47	17.15
Age of husband (in years)	≤25	42	15.71
	26-30	58	21.42
	31-35	108	40.00
	36-40	46	17.15
	>40	16	5.72
Religion	Hindu	135	50.00
	Muslim	112	41.42
	Buddhist	23	8.58

Residence	Urban	162	60.00
	Rural	108	40.00
Socioeconomic status	Class I	46	17.15
	Class II	62	22.85
	Class III	77	28.57
	Class IV	35	12.85
	Class V	50	18.58
Education of pregnant mother	Graduate/post graduate	46	17.15
	Diploma/post high school certificate	12	4.29
	High school certificate	120	44.28
	Middle school certificate	92	34.28
Education of husband	Graduate/post graduate	85	31.42
	Diploma/post high school certificate	35	12.85
	High school certificate	127	47.15
	Middle school certificate	23	8.58
Occupation of pregnant mother	Professional	15	5.72
	Skilled worker	31	11.43
	Home maker	224	82.85
Occupation of husband	Professional	42	15.71
	Clerical,shop owner,farm owner	92	34.28
	Skilled worker	108	40.00
	Semi skilled worker	4	1.42
	Unskilled worker	24	8.59
Type of family	Nuclear	123	45.73
	Joint	112	41.42
	Three generation	35	12.85

Out of 270 study participants, maximum 77 (28.57%) of females were belonged to age group of 26-30 years. Majority 135 (50.00%) were hindu by religion, followed by Muslim i.e. 112 (41.42%). Among total females majority 162 (60.00%) were residing at urban area, maximum 77 (28.57%) were belonged to class III socioeconomic class, 120 (44.28%) were educated up to high school certificate level, 224 (82.85%) were homemaker and 123 (45.73%) were from nuclear family.

Table No.2: Distribution Of Study Participants As Per Marital Factors.

Marital factors		No.	%
Marital age of pregnant mother (in years)	≤20	120	44.28
	21-25	62	22.85
	26-30	65	24.29
	>30	23	8.58
Type of marriage	Consanguineous	70	25.72
	Non consanguineous	200	74.28

Out of 270 study participants 120 (44.28%) females were having marital age ≤20 years and majority 200 (74.28%) were Non consanguineous marriage.

Table No.3: Distribution Of Study Participants As Per Obstetric Factors.

Obstetric factors		No.	%
Pregnancy status	Planned	224	82.85
	Unplanned	46	17.15
Time of anc registration	<16weeks	240	88.57
	>16weeks	30	11.43
Current gestational age	≤12weeks	77	28.58
	13-26weeks	81	30.00
	>26weeks	112	41.42
Gravida	Primigravida	135	50.00
	Multigravida	135	50.00
Parity	Nullipara	135	50.00
	Primipara	105	38.57
	Multipara	30	11.42
Previous abortion	Yes	46	17.15
	No	224	82.85
Previous obstetric complications	Yes	46	17.15
	No	224	82.85

Among total, majority 224 (82.85%) were planned pregnancy, 135 (50.00%) were nullipara, 224 (82.85%) had no history of previous abortion and no history of previous obstetric complications.

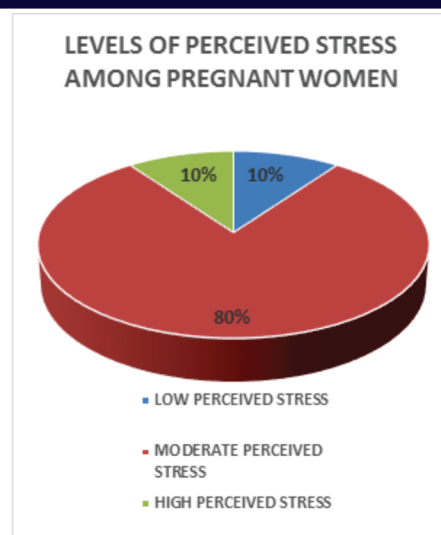


Fig 1: Pie Diagram Showing Percentage Of Perceived Stress Among Pregnant Women

According to Perceived stress scale, majority were having moderate perceived stress (80%) followed by low perceived stress (10%) and high perceived stress (10%).

Table No.4: Association Of Sociodemographic Variables And Perceived Stress Among Study Participants.

Sociodemographic variables		Perceived stress		Test	p-value
		Present	Absent		
Age of pregnant mother (in years)	≤20	42	8	Fisher exact test	0.3086
	21-25	50	4		
	26-30	77	0		
	31-35	32	10		
	>35	42	5		
Age of husband (in years)	≤25	35	7		>0.99
	26-30	55	3		
	31-35	100	8		
	36-40	38	8		
	>40	15	1		
Religion	Hindu	123	12		>0.99
	Muslim	96	16		
	Buddhist	24	1		
Residence	Urban	150	12		0.561
	Rural	93	15		
Socioeconomic status	Class I	46	0		0.045*
	Class II	62	0		
	Class III	77	0		
	Class IV	35	0		
	Class V	23	27		
Education of pregnant mother	Graduate/post graduate	38	8	Fisher exact test	0.688
	High school certificate	112	8		
	Middle school certificate	81	11		
Education of husband	Graduate/post graduate	77	8		>0.99
	Diploma/post high school certificate	35	0		
	High school certificate	112	15		
	Middle school certificate	19	4		
Occupation of pregnant mother	Professional	15	0		0.183
	Skilled worker	20	11		
	Home maker	208	16		
Occupation of husband	Professional	35	7		0.6039

	Clerical,shop Owner,farm owner	88	4		
	Skilled worker	96	12		
	Semi skilled worker	4	0		
	Unskilled worker	20	4		
Type of family	Nuclear	108	15		0.8054
	Joint	104	8		
	Three generation	31	4		

There is a significant association between socio economic class and perceived stress among study participants with df 1 and p-value 0.045. Other sociodemographic factors were not found statistically significant

Table No.5: Association Of Marital Factors And Perceived Stress Among Study Participants.

Marital factors		Perceived stress		Test	P-value
		Present	Absent		
Marital age of pregnant mother (in years)	≤20	108	12	Fisher exact test	0.963
	21-25	62	0		
	26-30	54	11		
	>30	19	4		
Type of marriage	Consanguinous	70	0		0.223
	Non consanguinous	173	27		

There is no significant association found between marital factors and perceived stress among study participants.

Table No.6: Association Of Obstetric Factors And Perceived Stress Among Study Participants.

Obstetric factors		Perceived stress		Test	P-value
		Present	Absent		
Pregnancy status	Planned	200	24	Fisher exact test	>0.99
	Unplanned	43	3		
Time of anc registration	≤16weeks	220	20		0.359
	>16weeks	23	7		
Current gestational age	≤12weeks	73	4		0.696
	13-26weeks	65	16		
	>26weeks	105	7		
Gravida	Primigravida	116	19		0.428
	Multigravida	127	8		
Parity	Nullipara	120	15		>0.99
	Primipara	93	12		
	Multipara	30	0		
Previous abortion	Yes	43	3		>0.99
	No	200	24		
Previous obstetric complications	Yes	46	0		0.5016
	No	197	27		

There is no significant association found among obstetric factors and perceived stress among study participants.

DISCUSSION

Among the sociodemographic factors, we could not demonstrate any relevant association of pregnancy related stress with maternal/paternal age, mother's education and occupation; and husband's education similar to Pooja et al⁴. In regard to the relationship of stress with a woman's education, different studies report conflictive findings. While Lau and Yin opined that well educated women could handle stress in a better way during pregnancy; various studies claim that the stress levels could be much higher in this group. But in this study there is no significant association between stress and education of pregnant women.

Kingston et al² and Renae Stancil et al³, found lower levels of stress in lower income group women which is similar to our study. There is no significant relationship between the kind of husbands' job and perceived stress by pregnant mothers. This result is contrast with Farkas and Valdes's analysis.

This research could not find any important linkage between stress and obstetric history, although many studies show higher levels of anxiety and stress among primiparous women. Also, an unplanned pregnancy or a history of medical complaint did not appear to predispose to

prenatal anxiety in Nath et al¹⁰ while authors research and similar studies identified unplanned pregnancy to be significant predictor of stress in pregnancy.

Limitations

The cross-sectional study could not help the researcher to establish cause - effect relationship. This study was a hospital-based study; hence findings may not reflect the stress of all pregnant women in the community.

CONCLUSION AND RECOMMENDATION

The questionnaire for specific pregnancy stress was long. Therefore, some respondents got exhausted to reply them completely. Secondly, the mood of women at the time of filling the questionnaire might had influence on their response. Finally, with a quantitative research, we cannot immerse in depth of women's feeling about their stress and their financial and social needs. Future research should be focused upon widespread community-based studies to estimate prevalence of stress in a general population of pregnant women because much of the estimates in the current literature are derived from hospital-based study.

Considering the adverse neonatal outcomes and psychological ill-health of new mothers, it is important to include screening and treatment of mental morbidity as a part of routine antenatal care in India. Pregnant women should discuss her emotional status with their partner or family members and also with the health care professionals. Health care professionals should screen for the perceived stress of primigravida women and provide adequate information on their pregnancy, provide emotional support and advise pregnant mothers.

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Conflict Of Interest: Nil

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