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A descriptive study to assess the level of stress among ante-natal mothers in a selected urban health post, Chennai

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Abstract
Background: Pregnancy is a beautiful journey in the life of every woman. Pregnancy is a time of growth and hope. Pregnancy is a complex phenomenon which includes physiological, psychological and social changes. Accommodating a healthy pregnancy is one of the best ways to promote a healthy birth. Feeling stressed is common during pregnancy because pregnancy is a time of many changes. During pregnancy, it's important to consider mental wellbeing as much as physical health of the ante-natal mother.
Methodology: A descriptive survey research design was chosen. A total of 60 Ante-natal mothers were selected by convenient sampling at selected urban health post, Chennai. Structured interview schedule was used to collect the data from ante-natal mothers. The perceived stress scale was used to assess the stress level among ante-natal mothers. The collected data were organized, tabulated, analyzed and interpreted by using descriptive statistics.
Results: The study reveals that 11 (18.3%) ante-natal mothers had low level of stress, 42 (70%) ante-natal mothers had moderate level of stress and 7 (11.6%) ante-natal mothers had high level of stress. The calculated chi square value showed that there was significant association was found in selected demographic variables such as education, type of family, parity, gestational age of the mother, present pregnancy, duration of sleep per day and types of previous delivery at $p < 0.05$.
Conclusion: The study shows that ante-natal mothers had moderate level of stress. Therefore, measures must be taken during the time of pregnancy like psychological support, ante-natal check-ups, counselling and family support, etc. to reduce the level of stress among ante-natal mothers.
Recommendations: This study recommends that all pregnant people should be screened and treated for perceived stress. Ante-natal mothers must be strongly evaluated and intervened for perceived stress. They can provide valuable educational material as well as conduct and coordinate strategies for health care plans to improve the maternal and infant health and initiate healthy therapeutic measurements for all pregnant women.

Keywords: Stress, ante-natal mothers

Introduction

Pregnancy is a beautiful journey in the life of every woman. Pregnancy is a time of growth and hope. Pregnancy is a complex phenomenon which includes physiological, psychological and social changes. Accommodating a healthy pregnancy is one of the best ways to promote a healthy birth. Acquire early and regular prenatal care improves the chances of a healthy pregnancy. Stress is a complex genetically determined pattern of response of the human physiology to a demanding situation [2]. The element of perception indicates that human stress responses reflect differences in personality, as well as differences in physical strength or general health. Feeling stressed is common during pregnancy because pregnancy is a time of many changes [1]. During pregnancy, It's important to consider mental wellbeing as much as physical health of the ante-natal mother. Women perceive stress in pregnancy. Factors associated with stress can be related to past obstetric history, planning of pregnancy, socio-demographic factors or cultural issues specific to the region [4]. Stress can also exacerbate issues with the placenta, such as preeclampsia, eclampsia, and fetal growth restriction. Emotional stress during pregnancy may affect cognitive development and may lead to attention difficulties, behavioral problems, or increased negative emotions in a child. Worldwide reports of prevalence of ante-natal stress in pregnancy varies from 11.6% to 46.7%.

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Almost 1 in 5 women will experience a mental health condition during pregnancy or in the year after the birth. Among women with perinatal mental health conditions, 20% will experience suicidal thoughts or undertake acts of self-harm [5]. Ignoring mental health not only risks women's overall health and well-being, but also impacts infants' physical and emotional development.

The study objectives
- To assess the level of stress among ante-natal mothers.
- To find out the association between the level of stress among ante-natal mothers with their selected demographic variables.

Materials and methods
A quantitative research approach with descriptive research design was adopted in the study. A formal approval was obtained from the Medical officer of urban health post, Chennai. The data collection procedure was carried out after obtained permission from the concerned authorities. The data were collected by using structured interview questionnaires and assessed the level of stress with Perceived stress scale by the investigator. The sample size consisted of 60 Ante-natal mothers from the selected urban health post, Chennai. Non-probability convenient sampling technique was adopted to select the subjects. The study excluded the ante-natal mothers who were with any chronic disease and not willing to participate. The data were collected by using structured interview questionnaires by the investigator.

It consists of three sections.

Section I
Demographic variables which includes 10 variables such as age of the mothers, type of occupation, monthly income of the family, education, religion, type of family, Present pregnancy, type of exercises, duration of sleep per day and type of previous delivery.

Section II
Obstetric variables consists of Gravida, parity, gestational age of the mothers.

Section III
Perceived stress scale was used to assess the level of stress among antenatal mothers. This is a 4 point scale for response ranging from 0 to 4 (0- Never, 1- Almost never, 2- Sometimes 3- Fairly often and 4- Very often) based on the subject's experiences. The instruments evaluate the stress among ante-natal mothers and is composed of 10 items. Maximum score was 40 and minimum was 0. Pilot and final study was conducted after obtaining formal permission and consent of the participants. Confidentiality and anonymity was maintained of the participants. Collected data was analyzed using descriptive statistics.

Result
Section A: This section shows the characteristics of ante-natal mothers on the basis of demographic and obstetric variables.

Table 1: Frequency and percentage distribution of demographic variables of the samples N=60

S. No.	Demographic variables	Ante-natal Mothers	
		Frequency	Percentage
1.	Age of mothers in years		
	(a) > 20 yrs	1	1.6
	(b) 21-25yrs	29	48.3
	(c) 26-30 yrs	14	23.3
	(d) 30 yrs and above	16	26.6
2.	Type of occupation		
	(a) Sedentary work	51	85
	(b) Secondary work	9	15
	(c) Heavy work	0	0
3.	Monthly income of the family		
	(a) Below 2000%	0	0
	(b) 2000-4000%	0	0
	(c) 4000-6000%	1	1.6
	(d) 6000% and above	59	98.3
4.	Education		
	(a) Illiterate	0	0
	(b) Primary	1	1.6
	(c) Secondary	7	11.6
	(d) Higher secondary	11	18.3
	(e) Graduate	41	68.3
5.	Religion		
	(a) Hindu	49	81.6
	(b) Muslim	6	10
	(c) Christian	6	10
6.	Type of family		
	(a)Nuclear	39	65
	(b)Joint	21	35
7.	Present Pregnancy		
	(a) Expected	58	96.6
	(b) Unexpected	2	3.3
8.	Types of exercise		

	(a) Walking	59	98.3
	(b) AN exercises	1	1.6
	(c) None	0	
9.	**Duration of sleep per day**		
	(a) >6hrs/day	46	76.6
	(b) 6-8 hrs/day	12	20
	(c) 8-10 hrs/day	2	3.3
	(d) >10 hrs/day	0	
10.	**Type of previous delivery**		
	(a) LSCS	21	35
	(b) Normal delivery	16	26.6
	(c) Others	1	1.6
	(d) None	22	36.6

Table 1: The frequency and percentage distribution of demographic variables of the ante-natal mothers showed that 29 (48.3%) belonged to the age group between 21- 25 yrs, 51 (85%) were sedentary work, 59 (98.3%) were having monthly income of Rupees 6000/- and above, 41 (68.3%) ante-natal mothers were graduate, 49 (81.6%) were Hindu, 39 (65%) were from Nuclear family, 58 (96.6%) had expected present pregnancy, 59 (98.3%) ante-natal mothers were going for walking and 46(76.6%) sleep more than 6hrs/day.

Obstetric variables

Table 2: Frequency and percentage distribution of obstetrics variables of the samples

S. No.	Obstetric variables	Ante-natal mothers	
		No	**%**
1.	**Gravida**		
	(a) One	27	45
	(b) Two	30	50
	(c) Three or more	3	5
2.	**Parity**		
	(a) Zero	26	43.3
	(b) One	32	53.3
	(c) Two	2	3.3
	(d) Three	0	
3.	**Gestational age of the mother**		
	(a) First trimester	18	30
	(b) Second trimester	27	45
	(c) Third trimester	15	25

Table 2: The frequency and percentage distribution of obstetric variables of the ante-natal mothers showed that 30 (50%) were 2nd Gravida, 32 (53.3%) had 2nd Parity and 27 (45%) mothers were in second trimester.
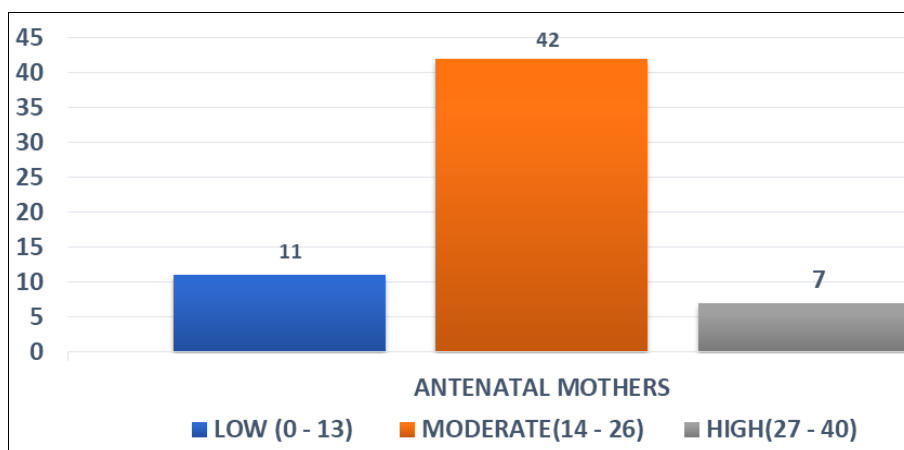
Section B

Fig 1: Level of stress among antenatal mothers

This section deals with assess the level of stress among ante-natal mothers. The study reveals that 11 (18.3%) ante-natal mothers had low level of stress and 42 (70%) ante-natal mothers had moderate level of stress and 7(11.6%) ante-natal mothers had high level of stress.
The study reveals that, statistical significant association was found in education, type of family, parity, gestational age of the mother, present pregnancy, duration of sleep per day and types of previous delivery at $p < 0.05$.

Discussion
Stress is perceived when there is an imbalance between

demands of life and the adaptive capacity of an individual. Appraisal of an event as stressful by an individual can lead to series of stress response mechanisms in different domains like psychological, physiological and behavioral.

Part I: Discussion of Socio-Demographic Data
The frequency and percentage distribution of demographic variables of the ante-natal mothers showed that 29 (48.3%) belonged to the age group between 21- 25 yrs, 51 (85%) were sedentary work, 59 (98.3%) were having monthly income of 6000/- and above, 41 (68.3%) ante-natal mothers were graduate, 49 (81.6%) were Hindu, 39 (65%) were from Nuclear family, 58 (96.6%) had expected present pregnancy, 59 (98.3%) ante-natal mothers were going for walking and 46 (76.6%) sleep more than 6 hrs/day.
The frequency and percentage distribution of obstetric variables of the ante-natal mothers showed that 30 (50%) were 2nd Gravida, 32 (53.3%) had 2nd Parity and 27 (45%) mothers were in second trimester.

Part-II: Discussion of level of stress among ante-natal mothers
The present study reveals that 11 (18.3%) ante-natal mothers had low level of stress and 42 (70%) ante-natal mothers had moderate level of stress and 7 (11.6%) ante-natal mothers had high level of stress. Another study conducted by Linda varghese *et al*., to study the level of stress that 51% had average to high level of stress and 49% had low to very low level of stress.

Part-III: Association between the levels of stress among ante-natal mothers with their selected demographic variables: The association of selected demographic variables of the present study, that there is a statistical significant association was found in education, type of family, parity, gestational age of the mother, present pregnancy, duration of sleep per day and types of previous delivery at $p < 0.05$. Another study conducted by Maria pais *et al*., that there was significant association between the level of antenatal stress and gravida (p = 0.002), educational status (p=0.034) and monthly family income (p=0.024).

Conclusion
The study shows that ante-natal mothers had moderate level of stress. Therefore, measures must be taken during the time of pregnancy like psychological support, ante-natal check-ups, counselling and family support, etc. to reduce the level of stress among ante-natal mothers.

Recommendations
This study recommends that all pregnant people should be screened and treated for perceived stress. Ante-natal mothers must be strongly evaluated and intervened for perceived stress.They can provide valuable educational material as well as conduct and coordinate strategies for health care plans to improve the maternal and infant health and initiate healthy therapeutic measurements for all pregnant women [3].

Conflict of Interest
Not available

Financial Support
Not available

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