Journal of Advanced Research in Psychology & Psychotherapy
Volume 5, Issue 1&2 - 2022, Pg. No. 1-6
Peer Reviewed & Open Access Journal

Research Article

A Comparative Study to Assess the Level of Stress during Antenatal Period between Urban and Rural Primi Mothers attending Antenatal OPD of IMS and SUM Hospital, Bhubaneswar, Odisha

Aparajita Goswami

Associate Professor, BP Poddar & Parvati Devi Academy of Nursing, Kolkata, West Bengal, India.
DOI: https://doi.org/10.24321/2581.5822.202201

I N F O

E-mail Id:
aparajitagoswami96@gmail.com
Orcid:
https://orcid.org/0000-0002-1839-2490
How to cite this article:
Goswami A. A Comparative Study to Assess the Level of Stress during Antenatal Period between Urban and Rural Primi Mothers attending Antenatal OPD of IMS and SUM Hospital, Bhubaneswar, Odisha. J Adv Res Psychol Psychother. 2022;5(1&2):1-6.

Date of Submission: 2022-01-15
Date of Acceptance: 2022-05-17

A B S T R A C T

Introduction: Many women feel stressed during pregnancy.The present study aimed to assess the level of stress during the antenatal period between urban and rural primi mothers attending antenatal OPD of IMS and SUMHospital, Bhubaneswar, Odisha. The objectives of the study wereto assess the level of stress of primi mothers of rural and urban areas during the antenatal period. The investigator adopted Lazarus and Folkman's model of stress and coping as the conceptual framework for the study.

Method: A descriptive comparative research design was used and the investigator selected 100 samples using non-probability convenient sampling technique. The level of stress wasassessed by using modified 3 point rating scale. Descriptive and inferential statistics were usedfor the analysis of data.

Results: The mean level of stress score in urban was 41 and in rural was 36. The p value in comparing the level of stress was 0.0001 which signifies there is a significant differencebetween the level of stress among the rural and urban groups. Overall both the groups' weremoderately stressed. The study also shows a significant association with age, duration of marriageand pregnancy complications in the development of stress.

Conclusion: The study recommends counselling sessions for both the groups of mothers and support to reduce their level of stress.

Keywords: Stress, Primi Mother, Antenatal Period

Introduction

The word stress was actually first used in the world of physics and engineering. It referred to the heavy forces that may be put on a building or a bridge. Stress is a force which creates upset stomach, gnawing, fear, migraine, headaches, severe grief and violence. Memories are dulled

by the stress in one's life, thinking ability diminishes and efficiency is retarded.[1]

Pregnancy is a time of great change and many women do feel stressed at some point. This is completely natural and not at all surprising considering a woman hasto cope with the responsibilities that filled her life before she fell pregnant as well as prepare herself, psychologically, and physically for a new arrival. While short-term stress is not detrimental to the health of the mother or baby and can actually be beneficial in certain circumstances (as it can increase alertness and performance), prolonged periods of stress have been linked to negative health consequences.[2]

Perry L stated that women in comparison to men are twice as likely to have stress, depression, anxiety or panic attacks. The physical symptoms associated with stress such as increased heart rate, blood pressure, and muscle tension are actually part of our fight or flight response - a biological survival mechanism that helped physically prepare our ancestors to escape from danger.[3]

Need of the Study

Pregnancy is a period of excitement, expectancy, anxiety and even fear for the pregnant woman. She has to cope with the physical and psychological changes that occur during pregnancy and for this, she needs the support of family members.[4]

Women experience dramatic changes during pregnancy and delivery, making them highly sensitive to emotional stimuli and sometimes accompanied by psychological problems. Maternal psychological state affects the intrauterine environment and has a great impact on fetal growth and health.[5]

Anxiety disorders are prevalent during pregnancy, playing a large part in the quality of health. The results of various studies suggest an increase of anxiety disorders up to 30% and more in pregnancy may have an adverse impact on the foetus and neonate.[6]

Objectives of the Study

- To assess the level of stress of primi mothers of rural areas during the antenatal period
- To assess the level of stress of primi mothers of urban areas during the antenatal period
- To compare the stress among rural and urban primi mothers
- To find out the association between the level of stress and selected demographic variables

Methodology

Research Approach: Descriptive survey approach is used in this study.

Research Design: Non-experimental descriptive comparative design is used in this study.

Research Setting: The present study was conducted atIMS and SUM Hospital, Bhubaneswar, Odisha.

Target Population: In this study, the target population included all the antenatal primi mothers (between 29 to 39 weeks of gestation) visiting the OPD of IMS and SUM Hospital, Bhubaneswar, Odisha.

Sample: Study samples werethe antenatal primi mothers (30-40 weeks of gestation) attending the OPD IMS and SUM Hospital, Bhubaneswar, Odisha.

Sample Size: 100

Sampling Technique: In the present study, non-probability convenient sampling technique was used.

Inclusion Criteria

- Mothers who werepregnant for the first time
- Those willing to participate in the study
- Women who werein between 29th to 40th gestational weeks
- Able to communicate in English and Odia

Exclusion Criteria

- Mothers who haddifficulty and complications during pregnancy
- Mothers who werereluctant to express their opinion

Description of the Tool

Tool A: Sociodemographic Data

It was constructed to collect the data regarding the age, duration of marital life, religion, educational status, type of occupation, family income per month, area of residence, type of family, financially dependency, and any complication during pregnancy, health information obtained regarding pregnancy.

Tool B: Rating Scale on Assessment of the Level of Stress among Antenatal Primi Mothers

Modified 3 point rating scales for assessment of the level of stress among the antenatal primi mothers developed on the basis of Wang 34 scale. The Wang 34 scale is valid and reliable (0.86).This scale includesa total of 34 stress items divided into four categories: a) Concerns about the baby-9 items, b) Concerns about pregnancy- 14 items, c) concerns about body image - 5 items, d) Concerns about carrier and lifestyle - 4 items. The score of each it emranged from 1 to 4. The modified tool consisted of 5 factors and 30 items; in physical stress: 5 items, psychological stress: 7items, factors: 6 items, stress regarding pregnancy factors: 6 items, stress regarding baby factors: 4 items and socio-economical stress: 8 items.

ISSN: 2581-5822
DOI: https://doi.org/10.24321/2581.5822.202201

Score on each item was categorised as:

- Never-2
- Sometimes-1
- Always-0

Interpretation

For 30 items, maximum score given was 60 and it was categorisedaccording to the level of stress as:

- Mild (41-60)
- Moderate (21-40)
- Severe (10-20)

Procedure of Data Collection

Formal written permission was taken from the medical superintendent of IMS and SUM Hospital. Informed consent was obtained from all participants before beginning the study.

The study was carried out in the same way as that of the pilot study. A total of 100 samples, 50 from each study setting were selected who fulfilled the criteria.

The data were obtained by the following schedule:

- After the tool was found reliable, the main study was planned
- 50 antenatal primi mothers were selected from urban areas and 50 antenatal primi mothers were selected from the rural areas who attended the OPD of SUM Hospital
- The objectives of the study were discussed with the subjects
- The rating scale was explained and doubt was cleared

The actual data collection was from 1st February 2015 to 1st March 2015. A total of 30 days were spent on data collection. The average time taken for each subject was 15 minutes. Investigators thanked mothers for their cooperation and participation.

Results

Table 1 shows that 52% of urban antenatal primi mothers belonged to the age group of 20-25 years, 46% to the age group of 26-30 years, and only 2% were in the age group of 31-35 years. Among rural primi mothers, 62% belonged to the age group of 20-25 years, 24% belonged to the age group of 26-30 years and a few (14%) belonged to the age group of 31-35 years.

Table 2 shows that 34% of rural mothers had marital life of less than 1year, whereas majority (46%) had marital life between 1 and 3 years and only 20% had > 3 years. Among urban mothers, the duration of marital life of 32% of mothers was < 1 year, 44% had 1 year and 24% had > 3 years of marital life.

Table 1.Frequency and Percentage Distribution of Subjects according to Age in Both Groups

(N=100)

Age (in years)	Urban		Rural	
	Frequency (n=50)	%	Frequency (n=50)	%
20-25	26	52	31	62
26-30	23	46	12	24
31-35	1	2	7	14
Total	50	100	50	100

Table 2.Frequency and Percentage Distribution of Subjects according to Duration of Marital Life in Both Groups

(N=100)

Duration of Marital life (in years)	Urban		Rural	
	Frequency (n=50)	%	Frequency (n=50)	%
<1	16	32	17	34
1-3	22	44	23	46
> 3	12	24	10	20
Total	50	100	50	100

Table 3 shows that there was no significant illness in most (44% vs 54%) of the women in urban and rural groups. Hypertension was found in a few women (14% Vs 4%) in both groups. Similarly, few (18% vs 8%) had gestational diabetes.

Table 3.Frequency andPercentage Distributions of Subjects according to the Complication during Pregnancy in Both Groups

(N=100)

Complication during Pregnancy	Urban		Rural	
	Frequency (n=50)	%	Frequency (n=50)	%
Hypertension	7	14	2	4
GDM	9	18	4	8
Anaemia	5	10	7	14
Any other	7	14	10	20
Nothing significant	22	44	27	54
Total	50	100	50	100

Table 4 explains that the major factors for stress among rural mothers were socio-economical stress (75%), followed by physical stress (74.6%), psychological stress (73.4%), baby-related factors (70.5%), and pregnancy-related factors

ISSN: 2581-5822
DOI: https://doi.org/10.24321/2581.5822.202201

(58.5%), whereas urban mothers had stress mostly because of physical factors (73%), followed by psychological (63%), socio-economical (60.9%), baby-related (58.5%), and pregnancy-related (47.0%) factors.

Table 5 shows that stress was moderately present in maximum women in rural (84%) group and urban (58%) group. No one had severe stress. Less than half (42%) of women in urban and a few (16%) in the rural group had mild stress.

The data of Table 6 depict the mean stress level, SD and Z value of different categories of stress. The 'z' test shows (except for physical stress) a significant difference among the groups in all categories of stress at p value < 0.0001. The mean score in all categories of stress in urban women was higher than in rural women. As a more stress score indicates less stress and a less stress score indicates more stress among the group, so, it can be concluded that urban mothers had less stress than rural mothers.

Table 4.Analysis of Different Categories of Stress among Rural and Urban Antenatal Primi Mothers in Frequency and Percentage

(N=100)

Categories of Stress	Urban				Rural	
	Score obtained	Percentage	Rank	Score obtained	Percentage	Rank
Physical stress	365	73.0	1st	373	74.6	2nd
Psychological & emotional stress	441	63.0	2nd	514	73.4	3rd
Stress regarding pregnancy factor	212	35.3	5th	282	47.0	5th
Stress regarding baby factor	234	58.5	4th	282	70.5	4th
Socio economical stress	487	60.9	3rd	600	75.0	1st

Table 5.Identification of Level of Stress among Rural and Urban Antenatal Primi Mothers in Frequency and Percentage

(N=100)

Level of Stress	Rural		Urban	
	Frequency (n=50)	%	Frequency (n=50)	%
Severe stress (0-20)	0	0	0	0
Moderate stress (21-40)	42	84	29	58
Mild stress (41-60)	8	16	21	42

Table 6.Comparison of Different Categories of Stress between Urban and Rural Antenatal Primi Mothers through Z Test

(N=100)

Different Categories of Stress	Urban		Rural		Z Value	P Value	Inference
	Mean	SD	Mean	SD			
Physical stress	7.5	1.1	7.3	1.3	0.6	0.5	Not significant
Psychological stress	10.3	1.5	8.3	1.8	4.4	<0.0001	Extremely significant
Pregnancy related stress	5.6	1.9	4.2	1.5	4.1	<0.0001	Extremely significant
Baby factor related stress	5.6	1.1	4.7	1.3	3.9	<0.0001	Extremely significant
Socio economical stress	12	1.7	9.9	2.8	4.4	<0.0001	Extremely significant

ISSN: 2581-5822
DOI: https://doi.org/10.24321/2581.5822.202201

Table 7.Comparison between Overall Level of Stress between Urban and Rural Antenatal Primi Mothers through z Test

(N=100)

Level of Stress				Z Value	P Value	Inference
Urban		Rural				
Mean	SD	Mean	SD	6.3	Less than 0.0001	Extremely significant
41.0	4.1	35.0	5.5			

Table 8.Chi-square Analysis to Find the Association between Level of Stress and Socio-demographic Variable of Rural and Urban Antenatal Mothers

(N=100)

Demographic Variables	Level of Stress			Inference
	Chi-square	Df	P value	
Age	19.505	2	<0.0001	Extremely significant
Duration of marital life	19.505	2	<0.0001	Extremely significant
Educational status	2.478	5	0.7798	Not significant
Types of occupation	2.804	3	0.422	Not significant
Family income per month	3.072	4	0.5458	Not significant
Complication during pregnancy	15.201	4	0.0043	Very significant

Table 7 reveals a significant difference in the level of stress numerically among the group. The compared value found by 'z' test was extremely significant at p value < 0.0001. This expresses that the levels of stress between the two groups are highly comparable.

Table 8 reveals that age has an impact on the level of stress and similarly the duration of marital life and stress are associated with each other at p value < 0.0001. A very significant association also was found between stress and complication found in pregnancy at p value < 0.05.

Discussion

In the present study,the maximum number [about 52% (urban) and 62% (rural)] primi mothers were between the age group of 20-25 years, whereas the study finding of Jeyanthi I and Kavitha R[7] signify that the majority of the primigravid a respondents (53.3%) were in the age group of 21-25 years.

In the current study, less than half (46% vs 44%) of primi mothers had a duration of marital life between 1-3 years which is supported by a similar finding in a study by Nayak A[8] that shows that the majority (74%) of antenatal mothers had a married life of 1-2 years.

The present study shows that among rural mothers,major factors for stress were socio-economical stress (75%), physical stress (74.6%), psychological stress (73.4%), baby-related factors (70.5%), and pregnancy-related factors (58.5%),whereas the majority of urban mothers were experiencing physical stress (73%), psychological stress (63%), socio-economical stress (60.9%), stress because of baby-related factors (58.5%), and pregnancy-related factors (47.0%). Study findings of a similar study by Woods SM et al.[9]signifythat majority (78%) of antenatal mothers have low moderate psychological stress and 6% have high psychological stress.

In the current study,the majority of primi mothers (58% vs 84%) had moderate stress and the remaining (42% Vs 16%) had mild stress. These present study findings are strongly supported by the findings of a similar study by Geol BR[10] that revealed the majority (57.35%) of the primigravida mothers had moderate anxiety, whereas severe anxiety was found in 38.24% and only 4.4% of the primigravida mother had mild anxiety. The results of a study by Paikkeus P and Saisto T[11] partially support the present study and show that majority of the primi mothers had a moderate level of anxiety related to labour and delivery.

A significant association of the level of stress was found with age, duration of marital life at 0.001% level of significance and with complication during pregnancy at 0.05% level of significance. The current study is supported by another study result ofGeol BR[10] that showed that severe anxiety was found more among mothers below 20 years of age, mothers belonging to rural areas, and illiterate mothers who were coolie workers.

Conclusion

The present study tried to explore the level of stress and determined whether the residence plays a factor

ISSN: 2581-5822
DOI: https://doi.org/10.24321/2581.5822.202201

in the level of stress among rural and urban antenatal mothers. The study showed that they are different in their sociodemographic variables. The various categories of stress were identified as physical, psychological, pregnancy and baby factor-related stress and socio-economical stress. In all the categories, both the group of mothers were stressed. Overall, they were moderately stressed. But the level of stress significantly differed. The urban mothers were experiencing less stress than the rural mothers. The factors like poor socioeconomic conditions, less knowledge regarding pregnancy, and delivery and lack of family support are associated with stress. The level of stress is associated with age, duration of marital life and presence of complications during pregnancy. Mothers during the antenatal period require both counselling and support to relieve stress.

Source of Funding: None

Conflict of Interest: None

References

1. MindTools [Internet]. Stress management; [cited 2021 Dec]. Available from: http:www.mindtools.com/stress/understandstress/stressdefinition.html
2. Weiss RE [Internet].An overview of pregnancy signs and symptoms; 2020 [cited2021 Dec]. Available from:http://pregnancy.about.com/od/relaxationforlabor/a/stress.htm
3. Perry L. Maternity and women's health care. 9th ed. San Francisco, California: Mosby Elsevier; 2004.
4. Lucita M. Maternal stress and maternal and foetal outcome: a comparative study. Asian J Nurs EducRes. 2015;5(1):12-4. [Google Scholar]
5. Cunningham FG, Leveno KJ, Bloom S, Gilstrap L. Williams obstetrics. 23rd ed. New York: McGraw Hill Publication; 2010.23 p.
6. Bunevicius A, Cesnaite E, Kusminskas L, Mockute I, Bunevicius R. Antenatal mental state and anthropometric characteristics of the neonates: I. Impact of symptoms of depression and anxiety. Biol Psychiatry Psychopharmacol. 2007;9(1):7–10.
7. Jeyanthi I, Kavitha R. Anxiety and stress among the primigravida and multigravida- a comparative study. Couvery Res J. 2008;1(2):126-31.
8. Nayak A [Internet]. A pre experimental study to assess the effectiveness of music therapy in reducing the level of stress and anxiety regarding labour among antenatal mothers attending outpatient departmentin selected hospitals of Ududpi, Karnataka [dissertation]. Rajiv Gandhi University of Health Sciences; 2013 [cited2021 Dec]. Available from: http://52.172.27.147:8080/jspui/bitstream/123456789/8350/1/archana%20final%20thesis%20pdf.pdf
9. Woods SM, Melville JL, Guo Y, Fan MY, Gavin A. Psychosocial stress during pregnancy. Am J Obstet Gynecol. 2010;202(1):61.e1-7. [PubMed] [Google Scholar]
10. Geol BR. A study of the stress and primigravida and primipara mothers and their resultant emotional needs. J ObstetGynecol.1999;3(6):641-2.
11. Paikkeus P, SaistoT. Obstructive and gynaecology. JChildbirth PregAnxiety. 18(22).

ISSN: 2581-5822
DOI: https://doi.org/10.24321/2581.5822.202201