

Comparison Of Stress Between Urban And Rural Primi Mothers During Pregnancy

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Abstract: *Introduction: Pregnancy influences the physical and hormonal status of the body and many women experience it as stressful situation at some point. Objectives: The present study was aimed to assess and compare the level of stress among primi mother of rural and urban areas during antenatal period. Methods: A descriptive survey was conducted to find out the level of stress. Through appropriate sample size calculation 100 mothers were selected conveniently those were attending antenatal OPD. The questionnaire was developed for measurement of stress based on Wang-34 stress scale. Result: Among the women 84% were from rural and 58% from urban area. In both the groups no one had severe stress. They had moderate level of stress. The mean stress score in rural women was higher than urban women. The difference in level of stress among them was significant at p value < 0.0001 . Age, duration of marital life and complication during pregnancy had association with the level of stress. Conclusion: Stress during pregnancy can be dangerous for mother and baby. Finding the ways to reduce the stressful situation is very important for the health of the unborn baby. Counselling services are helpful for managing stress during their pregnancy.*

Introduction

Stress is something that everyone experiences in their life which build confidence to manage life situations. Pregnancy is a time of great change and it imposes a significant amount of stress on mother knowingly and unknowingly. While short term stress is not detrimental to the health of the mother or baby and can actually be beneficial in certain circumstances, but prolonged periods of stress have been linked to negative health consequences.¹ Some studies are suggestive that stress in pregnancy can cause certain hormonal changes that can impede the growth of the baby or bring preterm labour.² It has physical and emotional affects and creates positives and negative feelings. Even though everyone experiences stress, research has shown that pregnant women undergo psychological, physical and social changes during pregnancy.³ A high levels of stress, anxiety and depressive symptoms experienced by the women during pregnancy.^{4,5} The prevalence of depressive symptoms found was 29% with acute anxiety symptoms and the common factors for stress were lack of support, poverty, illiteracy, violence by the partner, ineffective coping.⁶ The stress experienced by the women was at moderate level and high levels stress was associated with many maternal factors.⁷ Even many women (19.4%) suffered from mood and anxiety disorders with depression (5.5%) and obsessive compulsive disorder (5.2%).⁸ The mothers of pre term babies had higher level of stress during pregnancy than the mothers of term babies.⁹

Methodology

The study was planned and conducted in the maternity clinic of IMS and SUM hospital, Bhubaneswar. This survey was planned to be conducted to compare the stress among rural and urban women those were attending this clinic. Sample size was calculated by the formula

$$N = \frac{4\sigma^2(Z_{cvit} + Z_{pwr})^2}{D^2}$$

N= total sample size for both the group

σ = assumed SD of each group.

Z_{cvit} = critical value

Z_{pwr} = Desired statistical power.

D= maximum expected difference between two means.

In this study

σ = assumed to be 5

Z_{cvit} = at 95% confidence interval it is 1.96

Z_{pwr} = statistical power at 90% is 1.282.

D=3

$$N = \frac{4 \times 5^2 (1.96 + 1.282)^2}{3 \times 3} = 116$$

A sample size of 100 was considered for both the groups in this study. Non probability convenient sampling technique was used to select the women. The tool was constructed through modified 3-point rating scale based on the wang-34 scale. The Wang 34 scale is a valid and reliable scale (0.86). This scale included total 34 stress items with Likert type of questions: Never-2, Sometimes-1, Always-0 in four categories: a) Concerns about the baby-9 items, b) Concerns about pregnancy- 14 items, c) concerns about body image -5items, d) Concerns about carrier and life style -4items. The modified tool consists of total 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. For 30 items maximum score given was 60 and it was categories according to level of stress and interpreted as mild (41-60), moderate (21-40), severe (10-20). Pilot study was conducted for 5 days in Fernandez hospital, Hyderabad and 5 days in Rural Health Training Centre, Jamujhari, Khurda. The proposal was sent to research ethical committee of the hospital and approval was taken. Prior permission was obtained from the Medical Superintendent and HOD, Dept. of OBs & Gyn of IMS and SUM Hospital. After the pilot study tool required modification in certain items. In order to establish the reliability of the tool it was administered to 20 antenatal primi mothers. The reliability of the tool was done by Split Half method and was calculated by Chronbach alpha formula. The calculated r value was 0.71, hence the items in the checklist were found approximately reliable. Data collection was done after formal written permission from the medical superintendent of IMS and SUM hospital. 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 criterias. The average time taken for each subject was 15 minutes. Data was analysed through descriptive and inferential statistics.

Result

Most of antenatal mothers in both the groups were between the age group of 20-25 years and married for 1 to 3 years. But majority mothers were house wives. Few were educated upto graduation in urban and higher secondary in rural. Urban mothers (56%) had more complications than the rural (46%) mothers. Majority of the rural (84%) and urban (58%) mothers had moderate stress and remaining 16% (rural) and 42% (urban) had mild stress.

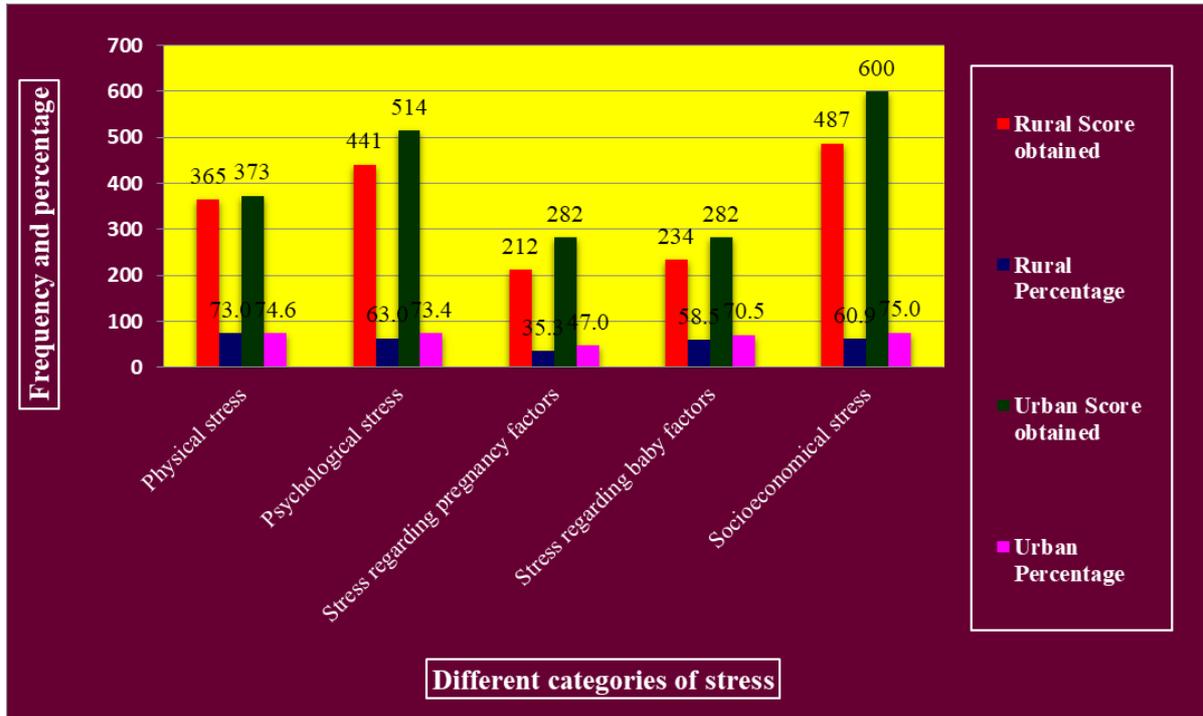


Fig. 1. Findings related to the different item in all categories of stress.

As regard to different items in all categories of stress among rural and urban antenatal primi mothers majority (75%) of rural mothers experienced more socio-economical stress, whereas majority (73%) of urban mothers experienced more physical stress.

Table.1. Comparison between different categories of stress.

Different categories of stress	Urban		Rural		Z value	P value
	Mean	SD	Mean	SD		
Physical stress	7.5	1.1	7.3	1.3	0.6	0.5
Psychological stress	10.3	1.5	8.3	1.8	4.4	<0.0001
Pregnancy related stress	5.6	1.9	4.2	1.5	4.1	<0.0001
Baby factor related stress	5.6	1.1	4.7	1.3	3.9	<0.0001
Socio economical stress	12	1.7	9.9	2.8	4.4	<0.0001

The overall level of stress was higher in urban (41 ± 4.1) than rural (35 ± 5.5) and there was significant difference in the level of stress at p value <0.0001.

A significant difference was found in psychological stress, stress regarding pregnancy factors, stress regarding baby factors and socio economical stress between the urban and rural mothers at 0.001 level of significance as shown in table-1.

Table.2: Comparison of overall stress between the urban and rural women

Level of stress		Z value	P value
Urban	Rural		

Mean	SD	Mean	SD		
41	4.1	35	5.5	6.3	Less than 0.0001

The overall stress was significantly different among the group. A very significant association also was found between stress and age, duration of marital life and complication found in pregnancy at p value <0.05

Discussion

In present study maximum number about 52% (urban) and 62% (rural) primi mothers were between the age group of 20-25 years, whereas the study findings of I. Jeyanthi & P. Kavitha¹⁰ signifies that majority of the primigravida respondents (53.3%) are in the age group of 21-25 years.

In current study less than half (46% Vs 44%) of primi mothers had duration of marital life in between 1-3 years which is supported by a similar findings of Archana Nayak that shows majority (74%) of antenatal mothers had married life of 1-2 yrs.¹¹

In present study among rural and urban mothers majority (84% Vs 66%) were unemployed/housewife in contrast the study findings of Janet F. Wang, Anthony A. Billings who reported 85.8% of primi mothers were currently employed, and only 2.9% were unemployed. In current study among urban mothers few were graduate (36%) and post graduate (22%) and others were undergraduate (42%) and in rural mothers very few 10% of them were graduate and others 90% were undergraduate. Whereas Janet F. Wang, Anthony A. Billings reported about 16.3% with middle school education, 27.2% had a high school education, and 47.5% had a 4-year college education.¹²

In present study more than half (62%) of rural mothers were belong to joint family and 60% of urban mothers were belong to nuclear family. Whereas another research study by I. Jeyanthi & P. Kavitha¹⁰ depicts majority of primigravida mothers (66.7%) were from joint family. Present study results shows that among rural mothers major factor for stress were socio-economical stress (75%), physical stress (74.6%), psychological stress (73.4%), baby related factors (70.5%), pregnancy related factors (58.5%). The majority of urban mothers were experiencing physical stress (73%), Psychological stress (63%), socio-economical (60.9%) and baby related factors (58.5%), pregnancy related factors (47.0%). Whereas a similar study by **Woods. M Sarah et al.**⁷ reveals that majority (78%) of antenatal mothers had low moderate psychological stress and 6% had high psychological stress.

Another similar study by Mary E Coussons-Read which interpreted that pregnant mothers (87%) were worried for the health of their babies, 75% had concern about childbirth and 52% expressed their dissatisfaction about physical attractiveness.¹³

In current study majority of Primi mothers (58% Vs 84%) had moderate stress and remaining (42% Vs 16%) had mild stress. This present study findings are strongly supported by a similar study findings of Balla Geol. R.¹⁴ that revealed most (57.35%) of the mothers had moderate anxiety, whereas 38.24% had anxiety at moderate level and only 4.4% of the mother had mild anxiety. Another study by P. Paikkeus et al.¹⁵ reported that majority of the Primi mothers had moderate level of anxiety related to labour and delivery. Another study conducted by Pantha, Sandesh showed that prevalence of stress was 35% in the first trimester and 34.2% in third trimester of pregnancy. The present study tried to explore the level of stress and determined whether the residence plays as a factor differences in the level of stress among rural and urban antenatal mothers. The study showed they are different in their socio demographic variable. The various categories of stress were identified like physical, psychological, pregnancy and baby factor related stress and socio economical stress. In all the categories both the mothers are stressed. Pantha, Sandesh assumed that rural mother may have higher stress as the level of stress found was highly prevalent among urban population of Nepal.¹⁶

A significant association found between level of stress and age, duration of marital life and complication during pregnancy. Balla Geol. R.¹⁴ in her study highlighted that mothers below 20 years of age demonstrated severe anxiety, mothers from rural area and illiterate mothers who were coolie workers also found with severe anxiety. Similarly, Anwar E Ahmed reported about mothers who had pregnancy complication that is diabetes mellitus that had significant association with stress.¹⁷ Similarly, Nigus Alemnew Engidaw found the age of mother having association with perceived stress.¹⁸

Conclusion

Stress has deleterious effect on pregnancy and ultimately on mother and newborn baby. Pregnancy as a auspicious event in life of women should be always stress free. Maternal stress sometimes acts as a developmental teratogen like a case of drug and alcohol. This study has highlighted that moderate stress is highest among rural and urban mothers. This study also revealed that there is significant difference between the stress level of rural and urban antenatal primi mothers whereas urban mothers are experiencing less stress than the rural mothers. The level of stress is associated with age, duration of marital life and presence of complication during pregnancy. Every mother should be educated, supported and counselled with family members to prevent her from stress and providing a safe and healthy environment to lead her life during pregnancy.

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