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# Comparative Study to Assess the Level of Stress During Pregnancy Among Employed Women and Home Makers

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**Abstract:** Couples feel delighted once they find out that they are going to welcome a newborn in the family. During pregnancy stress is a common emotion encountered by the women. Stress can cause serious health issues among foetus and pregnant women like elevated blood pressure, premature labour, IUGR and preterm. The objective of this study was to assess and compare the perceived stress among employed and home maker pregnant women.

Comparative descriptive design was used. The study was conducted among the employed and home maker pregnant women in Aarupadai Veedu Medical College and Hospital, Puducherry, India. 110 pregnant (55 home maker + 55 employed women) women were selected by convenience sampling method. Modified pregnancy stress scale was used to collect the data and computed for analysis. The results of the study revealed that majority of the home maker belongs to the age group of 35 years (30.9%) and 41.8% of employed women belongs to 26-30 years. The mean score of stress among home maker pregnant women was 38.07±6.22 and among employed women it was 47.91±8.71. The mean difference was 9.84. The value of independent t- test was 6.814, significant at the level of $p < 0.001$. There was significant association found in the obstetrical complications, medication usage and their corresponding trimester among home maker pregnant women. Age, past obstetrical history, mode of conception and occupation were associated in employed pregnant women. It is concluded that employed women had more stress level than home makers

**Keywords:** Stress, Employed pregnant women, Home maker pregnant women

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## Introduction

Holding a newborn is the expecting happy events in everyone's life. All the women feel happy and elated about it. Though various factors cause discomfort to the pregnant women and felt stressed. Some of them are psychosocial, financial, personal and family conflicts. Stress is an assured component of life because of increasing complexities and competitiveness. Stress causes

disequilibrium between individual's internal and external environments and leads to develop the ability to meet that demands.

Researchers indicated that if the pregnant women had high level of stress during pregnancy, it causes negative outcomes notably Low Birth weight, PT and less healthy behaviors (Brunton *et al*., 2015). It has been demonstrated that the maternal serum or plasma corticotropin- releasing hormone (CRH) concentration level was increased and showed a rise marker for consecutive Preterm birth. There is evidence of adverse health effects among working women (>32 h/ week stressful job) manifested with babies with irritable cry, Low birth weight and pre-eclampsia hypertensive disorder complicating pregnancy. Pregnancy is a period of confusion, fear, sadness, anxiety, stress and even depression. This status was very harmful to the fetus as well as mother (Maggie Fernandes., *et al*., 2014). WHO states that neurological, mental and substance use disorders were responsible for 14% global burden of diseases among men and women. It also addressed that women were more deeply immersed with family responsibility and inclined to have higher stress levels that men.

It is estimated that 3,03,000 women die from complication of pregnancy and childbirth every year which can be reduced. We must support her needs and address to help her through pregnancy and post-natal period (Nast *et al*., 2013). Stress among antenatal mother causes vaso-constriction, triggering the hormone level to cause the high level of miscarriage and complications. Stress also reduces the uteroplacental blood flow which in turn causes fetal hypoxia. Working antenatal mother's had more complications namely miscarriage, preterm, Premature Rupture of Membranes (PROM), Antepartum Haemorrhage (APH), Intrauterine growth restriction (IUGR) and Still birth than non-working women (Kramer *et al*., 2009).

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The prevalence of stress, anxiety and depression were increasing (66.9%) (Pias *et al*., 2014) among difficulty in conceiving and increase in pregnancy associated complications. Recently holistic antenatal care approach was initiated by government but still the psychological aspects were ignored by the family and society (Sutariya, 2010).

The purpose of this study was to identify and weight up the perceived stress among employed and homemaker pregnant women and also to associate the stress level with selected demographic variables.

## Materials and Methods

Cross sectional study design was used in this study. This was conducted in antenatal OPD of Aarupadai Veedu Medical College and Hospital, Puducherry, India. All the pregnant women who meet the inclusion criteria were involved in this study. Institutional ethical clearance was acquired. The data were collected by self-structured and standardized tool. The modified pregnancy stress scale was utilized to obtain the Information from antenatal mothers. Data were scrutinized for its completeness and analyzed by SPSS version 22. Significant association was communicated at $p<0.001$.

## Results and Discussion

### *Demographic Variables of Pregnant Women*:

Total 110 antenatal mothers were participated. The demographic variables (Table 1) of employed women (n=55) showed that 41.8 % of them were between the age of 26-30 years, 54.5% were multigravida, 3.6% of them had irregular menstruation, 98.2% attended regular antenatal checkup. In their Pat pregnancy, 10.9% reported to have complication during antenatal period, 7.3% had complicated labour and 7.3% reported complications during postnatal period. Among them, 1.8% had Gestational diabetes mellitus, 23.6% had thyroid complicating pregnancy, 12.8% had hypertension disorder pregnancy and they were taking medication regularly, 58.2% of them were in 2nd trimester (Table 2, Fig. 1). Everyone was reported domestic violence. 61.8 % were

Table 1: Frequency and percentage distribution of demographic variables of Homemaker pregnant women (n=55) and employed pregnant women (n=55)

| Topic | Demographic Variables | Homemaker Pregnant women | | Employed Pregnant women | |
|---|---|---|---|---|---|
| | | F | % | F | % |
| **Age of the antenatal mother (in years)** | 21 – 25 | 12 | 21.8 | 10 | 18.2 |
| | 26 – 30 | 14 | 25.5 | 23 | 41.8 |
| | 30 – 35 | 12 | 21.8 | 11 | 20.0 |
| | Above 35 | 17 | 30.9 | 11 | 20.0 |
| **Gravida** | Primi gravida | 20 | 36.4 | 25 | 45.5 |
| | Multi gravida | 35 | 63.6 | 30 | 54.5 |
| **Parity** | Primi parity | 21 | 38.2 | 18 | 32.7 |
| | Multi parity | 33 | 60.0 | 30 | 54.6 |
| | None | 1 | 1.8 | 7 | 12.7 |
| **Number of living children** | 1 | 21 | 38.2 | 19 | 34.6 |
| | 2 | 10 | 18.2 | 6 | 10.9 |
| | 3 | 13 | 23.6 | 6 | 10.9 |
| | 4 and above | 10 | 18.2 | 17 | 30.9 |
| | None | 1 | 1.8 | 7 | 12.7 |
| **Number of deliveries** | One | 20 | 36.4 | 18 | 32.8 |
| | Two | 13 | 23.6 | 6 | 10.9 |
| | Three or more | 20 | 36.4 | 24 | 43.6 |
| | None | 2 | 3.6 | 7 | 12.7 |
| **Menstrual history** | Regular | 55 | 100.0 | 53 | 96.4 |
| | Irregular | 0 | 0 | 2 | 3.6 |

graduated and paid above Rs. 20,000/month as their salary. 3.6% had assisted conception.

Regarding the homemaker pregnant women 35 years (n=55), 63.6% were multigravida, 60% were multiparity women (Table 1). Among them 98.2% attend the routine check-up, 1.8% had Complication in the previous antenatal period, 23.7% had complication during previous Postnatal period. Among them, 3.6% had Gestational diabetes mellitus, 29.1% were having thyroid complicating pregnancy, 18.2% had hypertensive disorder during pregnancy (Table 2) and all of them were regularly taking drugs. 96.4% of homemaker pregnant women reported to have domestic violence, 5.5% had assisted mode of conception. Their family income was between Rs.20,000 - 30,000/month.

*Level of Stress*:

Modified stress scale was used to assess the stress during pregnancy and categorized as low,

Table 2: Frequency and percentage distribution of Clinical variables of homemaker pregnant women (n=55) and employed pregnant women (n=55)

| Topic | Clinical Variables | Homemaker Pregnant women | | Employed Pregnant women | |
|---|---|---|---|---|---|
| | | F | % | F | % |
| **Routine checkup** | Attended | 54 | 98.2 | 54 | 98.2 |
| | Not attended | 1 | 1.8 | 1 | 1.8 |
| **Past obstetrical history** | Complication during antenatal period | 1 | 1.8 | 6 | 10.9 |
| | Complication during labour | 2 | 3.6 | 4 | 7.3 |
| | Complication during postnatal period | 13 | 23.7 | 4 | 7.3 |
| | None | 39 | 70.9 | 41 | 74.5 |
| **Present obstetrical complications** | Gestational diabetes mellitus | 2 | 3.6 | 1 | 1.8 |
| | Thyroid | 16 | 29.1 | 13 | 23.6 |
| | Hypertension | 10 | 18.2 | 7 | 12.8 |
| | Any other | 3 | 5.5 | 0 | 0 |
| | None | 24 | 43.6 | 34 | 61.8 |
| **Medication use in antenatal mother** | Diabetes mellitus | 2 | 3.6 | 4 | 7.3 |
| | Hypertension | 10 | 18.3 | 6 | 10.9 |
| | Thyroid disorder | 18 | 32.7 | 11 | 20.0 |
| | Polycystic ovarian syndrome (Prenatal period) | 1 | 1.8 | 0 | 0 |
| | None | 24 | 43.6 | 34 | 61.8 |
| **Immunization schedule** | Administered | 54 | 98.2 | 55 | 100.0 |
| | Not administered | 1 | 1.8 | 0 | 0 |
| **You are in which trimester** | 1st trimester | 20 | 36.4 | 5 | 9.1 |
| | 2nd trimester | 19 | 34.5 | 32 | 58.2 |
| | 3rd trimester | 16 | 29.1 | 18 | 32.7 |

moderate and high. Among the homemaker pregnant women 69.09% experience low stress and 30.9% had moderate level of stress (Table 3) where as in employed pregnant women, 32.73% reported moderate level of stress and 67.27% had low level of stress. The mean scores were 38.07 (Homemaker, SD- 6.22) and 47.91 (Employed, SD-8.71), mean difference was 9.84 (Table 4).

Comparison of stress was calculated by student independent t- test t= 6.814, p=0.0001 ($p<0.001$) which was found to have significant. Association between level of stress and selected demographic variables were made between these two groups. In homemaker pregnant women

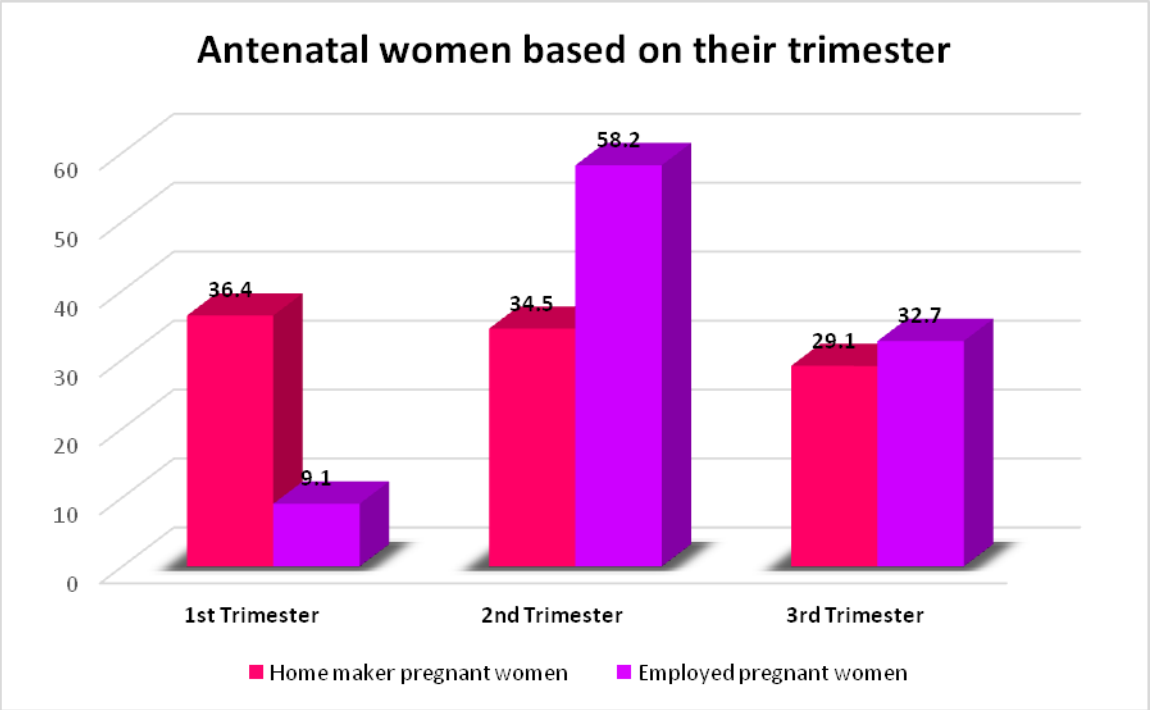


Fig. 1: Percentage distribution of antenatal women based on their trimester.

Table 3: Frequency and percentage distribution of stress among homemaker pregnant women (n=55) and employed pregnant women (n=55)

| Level of Stress | Homemaker pregnant Women | | Working Pregnant women | |
|---|---|---|---|---|
| | F | % | F | % |
| Low (≤50%) | 38 | 69.09 | 37 | 67.27 |
| Moderate (51 – 75%) | 17 | 30.91 | 18 | 32.73 |
| High (>75%) | 0 | 0 | 0 | 0 |

Table 4: comparison of t of stress between home maker (n=55) and employed pregnant women (n=55)

| Pregnant women | Mean | SD | Mean difference | Student Independent 't' test |
|---|---|---|---|---|
| Home maker | 38.07 | 6.22 | 9.84 | t = 6.814 p=0.0001, *** |
| Employed | 47.91 | 8.71 | | |

***p<0.001

group factors like present obstetrical complication (p=0.022), use of mediation (p= 0.025), trimester (p=0.034) was associated at the level of p<0.05.

In the employed pregnant women age (p=0.006), past obstetrical history (p=0.009), mode of conception (p=0.039), and their occupation (p=0.001) were associated with their stress level at p<0.01 and p<0.05.

Majority of women belongs to above 21- 35 and above years of age group, the most of them were homemaker. (0.9% above 35 years, 63.6% were multi gravida, 60% Multi parity, 38.2% had one child, 36.4% had one or more deliveries. All of them had regular menstrual history, (98.2%) had attended routine checkup, 70.9% had no bad past obstetrical history, 43.6% had no complication

during Present pregnancy, 43.6% had not been given any medication other than routine Medication, 98.2% had been administered with immunization schedule, 36.4% were in 1st trimester, 96.4% had faced domestic violence, 94.5% had spontaneous conception and 98.2% had healthy obstetrical history.

The most of the working pregnant women, 41.8% were aged between 26–30 years, 54.5% were multi gravida, 54.6% were multi parity, 34.6% had one child, 43.6% had two or more deliveries, 96.4% had regular menstrual history, 98.2% had attended routine checkup, 74.5% had no bad past obstetrical history, 61.8% had no complications, 61.8% had given routine medication, all of them were immunized, 58.2% were in 2nd trimester, 100% had faced domestic violence, 96.4% had spontaneous conception and 100% had healthy obstetrical history.

The present study revealed that among homemaker pregnant women, 38(69.09%) had low stress and 17(30.91%) had moderate level of stress whereas employed pregnant women 37(67.27%) had low stress and 18(32.73%) had moderate level of stress.

The mean difference was 9.84. The calculated independent t test value of 6.814 was found to be statistically significant at $p<0.001$ level which clearly infers that there was significant difference in the level of stress between the homemaker's pregnant women and employed pregnant women. It further shows that employed Pregnant women had experience more stress than those of homemakers. This result was supported by Johny Kutty (2019) who have stated that working women has more stress than non working women and that was depend on the nature of work they do (Linda Varghese *et al.*, 2018).

Knowing the impact of stress on the health status of fetus and mother, practicing the coping strategies for antenatal mother to reduce the level of stress is essential to lower the impact. Nurse/ Midwife should have the depth of knowledge regarding antenatal stress and how to handle the mother to lower the stress and promote the well being of fetus and mother. The study was conducted in health care setting in a particular location; hence the findings may not represent the entire employed and home maker pregnant women.

## Conclusion

The study concluded that both homemakers and employee antenatal mother were at more risk of highly develop stress during pregnancy which showed that the stress level between employed and homemaker pregnant women were statistically significant. The stress level was increased among employed pregnant women (41.8%) with homemakers (30.9%). Which show that employee women more stress level compared to homemakers during pregnancy. The early stage of identification of stress level during pregnancy will help to identify the high-risk cases of newborn.

## References


Brunton RJ, Dryer R, Saliba A and Kohlhoff J. (2015) Pregnancy anxiety: A systematic review of current scales. J Affective Disorders 176: 24-34.

Johny Kutty J. (2019) A comparative study to assess the level of stress among working and non working women. Int J Recent Sci Res. 10(04): 32094-32097.

Kramer MS, Lydon J, Séguin L, Goulet L, Kahn SR, McNamara H, Genest J, Dassa C, Chen MF, Sharma S, Meaney MJ, Thomson S, Van Uum S, Koren G, Dahhou M, Lamoureux J and Platt RW. (2009) Stress pathways to spontaneous preterm birth: the role of stressors, psychological distress, and stress hormones. Am J Epidemiol. 169(11): 1319-1326.

Larsen AD. (2015) The effect of maternal exposure to psychosocial job strain on pregnancy outcomes and child development. Danish Medical J. 62(2): B5015.

Linda Varghese, Aswathy K, Anitha J and Dimna D. (2018) Assess the stress among antenatal mothers. Indian J Public Hlth Res Develop. 9(4): 43-47.

Maggie Fernandes, Binitha J, Seema C, Sandhya P, Pratibha K and Nami K. (2014) Comparative study to assess the stress among working and non working antenatal mothers in selected hospitals in Udupi District. Nitte Univy J Hlth Sci. 4(3): 38-42.

Nast I, Bolten M, Meinlschmidt G and Hellhammer DH. (2013) How to measure prenatal stress? A

systematic review of psychometric instruments to assess psychosocial stress during pregnancy. Paediatric Perinatal Epidemiol. 27(4): 313-322.

Pais M, Murlidhar VP, Asha K, Anice G, Judith A Noronhna, Baby S Nayak, Jayaram N and Ganapathi J. (2014) Stress among Antenatal Women in India. Int J Nursing Care 2(2): 63-67.

Sutariya AL. (2020) A comparative study of the influence of family environment on the life stress of the working women of public and private sector. Int Referred Res J. ISSN-0974- 2832. Vol II, Issue 21.