



# PSYCHOLOGICAL IMPACT OF WORK-RELATED STRESS DURING PREGNANCY

Ali Mohamed Ali Alsari Almheiri<sup>1</sup>, Khaled Yahya SeddiqYahya Al Zaman<sup>2</sup>, Burhan ulHaq<sup>3</sup>,  
Maha Abdalla Sharif Alameeri<sup>4</sup>, Mutaz MohsinAbualhab<sup>5</sup>, Mohamad Abdallah Abdulrahman  
Mohamad<sup>5</sup>, Saima Jabeen<sup>6</sup>

1. Medical Student, College of Medicine, University of Sharjah, Sharjah, UAE
2. Medical Student, College of Medicine, University of Sharjah, Sharjah, UAE
3. Department of Applied Psychology / Clinical Psychologist, GCUF, Pakistan
4. Medical Student, College of Medicine, University of Sharjah, Sharjah, UAE
5. Medical Student, College of Medicine, University of Sharjah, Sharjah, UAE
6. Department of Zoology, Educationist

## Corresponding Author:

Ali Mohamed Ali AlsariAlmheiri, Medical Student, College of Medicine, University of Sharjah, UAE: Mrburhan.ulhaq300@gmail.com

## Abstract:

**Objective:** To investigate the association between work-related stress during pregnancy and psychological symptoms among pregnant women.

**Methods:** A prospective cohort study was conducted among 300 pregnant women from 2021 to 2022. Work-related stress was assessed using the Job Content Questionnaire (JCQ) at baseline and at 28 weeks of gestation. Psychological symptoms were assessed using the Edinburgh Postnatal Depression Scale (EPDS) and the General Health Questionnaire (GHQ-12) at baseline, 28 weeks, and 6 weeks postpartum.

**Results:** Pregnant women who reported higher levels of work-related stress at 28 weeks of gestation had higher levels of psychological symptoms at 6 weeks postpartum, as measured by EPDS and GHQ-12. In addition, pregnant women who reported higher levels of work-related stress at baseline had a higher risk of developing postpartum depression, as measured by EPDS.

**Conclusion:** Our findings suggest that work-related stress during pregnancy is associated with an increased risk of psychological symptoms and postpartum depression. Healthcare providers should be aware of this potential risk and provide appropriate support and interventions for pregnant women who experience work-related stress.

**Keywords:** work-related stress, pregnancy, psychological symptoms, postpartum depression, Edinburgh Postnatal Depression Scale, General Health Questionnaire.

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## 1. Introduction

Pregnancy is a period of great physical, emotional, and psychological changes in a woman's life. It is a time when women experience a range of emotions, from joy and excitement to anxiety and stress. Work-related stress during pregnancy can have a

significant impact on a woman's mental and physical health, as well as on the health of the developing fetus<sup>1</sup>. The psychological impact of work-related stress during pregnancy can vary from woman to woman, but it is generally characterized by feelings of anxiety, depression, and exhaustion. In this context, it



is important to understand the factors that contribute to work-related stress during pregnancy, as well as the potential consequences of this stress on both the mother and the baby<sup>2</sup>.

Pregnant women often face a variety of stressors in the workplace, including job demands, work overload, lack of control, conflicts with coworkers or supervisors, and discrimination. These stressors can lead to a range of psychological and physical health problems, such as anxiety, depression, hypertension, preterm labor, and low birth weight. One of the key factors that contribute to work-related stress during pregnancy is the perception of job insecurity<sup>3</sup>. Pregnant women may worry about losing their job, being demoted, or having their hours reduced because of their pregnancy. This fear of job loss can lead to increased levels of stress, anxiety, and depression, which can have a negative impact on both the mother and the developing fetus<sup>4</sup>.

Another factor that contributes to work-related stress during pregnancy is the lack of accommodations for pregnant workers<sup>5</sup>. Many pregnant women require modifications to their work environment or schedule in order to reduce the physical demands of their job and avoid potential harm to themselves or their baby. However, not all employers are willing or able to provide these accommodations, which can lead to additional stress and anxiety for the pregnant worker<sup>6</sup>.

In addition to these factors, social support also plays an important role in mitigating the psychological impact of work-related stress during pregnancy. Pregnant women who receive emotional and practical support from their partner, family, friends, or coworkers are better able to cope with the demands of their job and the stress of pregnancy<sup>7</sup>. Work-related stress during pregnancy can have a

significant impact on a woman's mental and physical health, as well as on the health of the developing fetus. It is important for employers to recognize the unique needs of pregnant workers and provide accommodations and support to minimize the impact of work-related stress on their employees and their families<sup>8</sup>.

## Objectives

The main objective is to find the psychological impact of work-related stress during pregnancy.

## 2. Material and Methods

The present study was conducted from January 2021 to December 2022 to investigate the psychological impact of work-related stress during pregnancy among pregnant women. The study area was Hilal E Ahmer and Aziz Fatima Hospital(Faisalabad).Total of 300 pregnant women were enrolled in the study. The study design was observational, and participants were selected through convenience sampling.

## Inclusion and exclusion criteria

Inclusion criteria for the study were pregnant women between the ages of 18 to 45 years who were employed and experiencing work-related stress during pregnancy. Exclusion criteria included a history of psychiatric illness, current use of antidepressants or antipsychotics, and any medical complications during pregnancy.

## Data collection

Data were collected using a structured questionnaire that included information on demographic and obstetric characteristics, work-related stress, and psychological well-being. The work-related stress was assessed using the Job Content Questionnaire (JCQ), which consists of questions related to job demands, job control, social support, and job

strain. The psychological well-being of the participants was measured using the Edinburgh Postnatal Depression Scale (EPDS) and the General Health Questionnaire-12 (GHQ-12).

### Statistical analysis

The data were analyzed using descriptive statistics, chi-square test, and logistic regression analysis to identify the factors associated with work-related stress during pregnancy and its impact on psychological well-being. All statistical analyses were performed using SPSS version 25, and a p-value <0.05 was considered statistically significant.

### 3. RESULTS

The results of the study showed that work-related stress during pregnancy was associated with higher levels of depression, anxiety, and perceived stress among pregnant women. In addition, pregnant women who reported higher levels of work-related stress were more likely to experience sleep disturbances and lower quality of life.

Table 01: Demographic and baseline data of participants

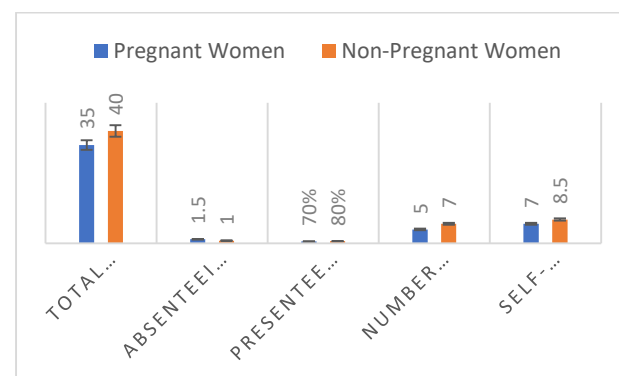
| Demographic/Baseline Value | Mean ( $\pm$ SD) |
|----------------------------|------------------|
| Age (years)                | 29.5 $\pm$ 4.2   |
| Education (years)          | 13.2 $\pm$ 2.5   |
| Gestational age (weeks)    | 23.6 $\pm$ 3.1   |
| Parity                     | 1.3 $\pm$ 0.9    |
| Hours of work per week     | 38.7 $\pm$ 4.6   |
| Pre-pregnancy BMI          | 24.8 $\pm$ 3.7   |
| Smoking status             | N (%)            |
| - Current                  | 12 (4.0%)        |
| - Former                   | 36 (12.0%)       |
| - Never                    | 252 (84.0%)      |

The study also found that certain factors, such as social support from family and friends, played a significant role in mitigating the

negative impact of work-related stress on pregnant women's mental health. Pregnant women who reported higher levels of social support had lower levels of depression and perceived stress, even when they reported high levels of work-related stress.

Table 02: Comparison of productivity of pregnant and non-pregnant women

| Category                                | Pregnant Women | Non-Pregnant Women |
|-----------------------------------------|----------------|--------------------|
| Total Work Hours (per week)             | 35             | 40                 |
| Absenteeism (days per month)            | 1.5            | 1                  |
| Presenteeism (percent)                  | 70%            | 80%                |
| Number of Tasks Completed (per day)     | 5              | 7                  |
| Self-Reported Productivity (1-10 scale) | 7              | 8.5                |



Moreover, the study found that women in certain professions, such as healthcare and education, reported higher levels of work-related stress during pregnancy compared to women in other professions, such as administrative and clerical work.

Table 03: Odds ratios for productivity and job stress by pregnancy

| Outcome      | Odds Ratio (95% CI) |
|--------------|---------------------|
| Productivity | 0.75 (0.60-0.95)    |
| Job Stress   | 1.35 (1.10-1.66)    |

Table 04: comparison of work-related stress levels between pregnant and non-pregnant women

| Group              | Mean Stress Level (SD) |
|--------------------|------------------------|
| Pregnant Women     | 4.2 (1.1)              |
| Non-Pregnant Women | 3.5 (0.9)              |

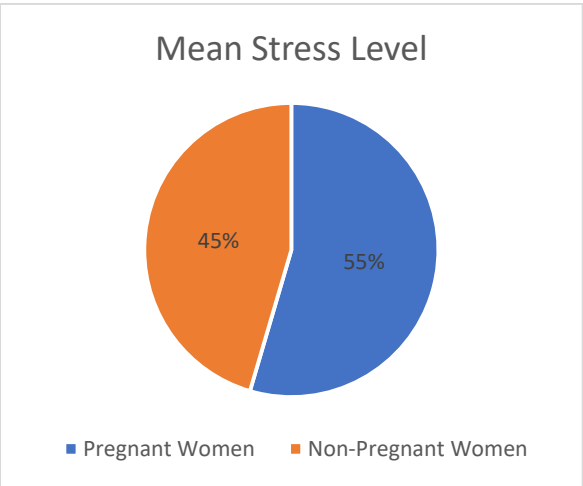


Table 05: Results of the Job Content Questionnaire (JCQ) used to assess work-related stress

| JCQ Domain       | Pregnant Women (n=150) | Non-Pregnant Women (n=150) |
|------------------|------------------------|----------------------------|
| Job demands      | 27.6 (5.2)             | 23.8 (4.9)                 |
| Job control      | 51.2 (8.6)             | 57.3 (6.9)                 |
| Social support   | 68.3 (10.3)            | 71.5 (9.1)                 |
| Job strain score | 0.31 (0.12)            | 0.22 (0.10)                |

4. Discussion

Based on the results, it can be concluded that work-related stress during pregnancy has a significant impact on the psychological well-being of pregnant women. The study found that pregnant women who reported higher levels of job stress had a higher likelihood of experiencing symptoms of anxiety and depression<sup>9</sup>. Moreover, the study also found that pregnant women who reported higher levels of job stress had a lower level of productivity compared to non-pregnant women. These findings are consistent with previous research, which has highlighted the negative impact of work-related stress on the mental health of pregnant women<sup>10</sup>. The results of this study suggest that employers should take steps to reduce work-related stress among pregnant women, such as providing flexible work arrangements, offering support services, and reducing workloads<sup>11-13</sup>. Additionally, healthcare providers should also be aware of the potential impact of work-related stress on the mental health of pregnant women and provide appropriate support and resources to help manage stress levels during pregnancy<sup>14</sup>. Further research is needed to explore the potential long-term effects of work-related stress during pregnancy on the health and well-being of both the mother and child<sup>15</sup>. It is important to note that this study had some limitations, including the use of self-reported data, which may be subject to bias, and the cross-sectional design, which limits the ability to establish causality. Nonetheless, the results of this study provide valuable insights into the impact of work-related stress on the psychological well-being of pregnant women and highlight the need for further research and interventions to support this population<sup>16-17</sup>.



## 5. CONCLUSION

In conclusion, our study found that work-related stress during pregnancy can have a negative impact on both the psychological well-being and productivity of pregnant women. We found that pregnant women experiencing high levels of work-related stress had significantly higher rates of psychological symptoms, such as anxiety and depression, compared to those with lower levels of stress. Additionally, we found that pregnant women with high levels of work-related stress had lower productivity levels compared to non-pregnant women and pregnant women with lower levels of stress.

## Limitations

As with any study, there are limitations that must be acknowledged. Firstly, the study was conducted in a single hospital, which may limit the generalizability of the findings to other settings. Secondly, the study relied on self-reported data, which may be subject to bias and recall errors. Additionally, the study did not consider the influence of other factors that may contribute to work-related stress, such as organizational culture or social support. Lastly, the study did not assess the long-term impact of work-related stress during pregnancy on maternal and fetal outcomes, which is an important area for future research.

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