

**RESEARCH ARTICLE****Evaluation of Primigravida Pregnant Women's Perceived Stress during First Trimester of Pregnancy****Suhad Hassan Omran, PhD<sup>(1)</sup> and Lujain Anwar Al-Khazraji, PhD<sup>(2)</sup>**<sup>(1)</sup> Clinical Nurse Specialist, Ministry of Health and Environment<sup>(2)</sup> Assistant Professor, Al-Kindy College of Medicine University of Baghdad**Corresponding author: Suhad Hassan Omran**Email: [suhadh935@gmail.com](mailto:suhadh935@gmail.com)**ABSTRACT**

**Objective(s):** To evaluate primigravida pregnant women's perceived stress during the first trimester of pregnancy and to determine the relationship between these women's perceived stress and their demographic characteristics of age, women's education, women's occupation, spouses' education, spouses' occupation, maternal medical history, and monthly income.

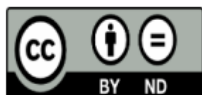
**Methodology:** Time dimension study design, using a longitudinal "follow-up type" study was conducted in primary health care centers from the health care sectors at Al-Russafa and Al-Karkh Health Directorates in Baghdad City, for the period of October 15th 2020 through January 17th 2022, in order to evaluate pprimigravida women's perceived stress. The sample was Convenient, non-probability, sample of (300) primigravida pregnant woman who are recruited from (10) main, (10) sub and (10) family medicine primary health care centers, (150) woman at Al-Russafa and (150) woman at Al-Karkh in Baghdad City. All primigravida pregnant women, who have participated in the study, have signed consent form for their agreements for the participation in the study. The questionnaire was designed as an instrument for collecting data through the use of the Self-report questionnaire was constructed for the purpose of the study. The study instrument was constructed through review of relevant literature, the questionnaire which consisted of two main parts. The first part relates to the primigravida pregnant women socio-demographic characteristics (such as age, woman's education, woman's occupation, spouse's education, spouse's occupation, pregnancy woman's medical history, monthly income) and the second part relates to the stressors that cause primigravida's perceived stress. This part is comprised of (70) item that evaluate primigravida pregnant women's perceived stress during pregnancy these items are distributed throughout (6) dimensions that include physical stressors (20) items, cognitive stressors (11) items, social stressors (16) items, emotional stressors (8) items, behavioral stressors (9) items and financial stressors (6) items. All items are measured on 3-level type Likert scale of never = 1, sometimes = 2 and always = 3. A pilot study was carried out for the period of November 4th through December 14th 2020 in order to determine the validity and reliability of the study instrument to (12) primigravida pregnant women. The reliability of the questionnaire was determined by using the Cronbach Alpha test, and the content validity of the questionnaire was determined throughout panel of (12) experts. The data were analyzed and described using the descriptive statistical data analysis approach of frequency, percentage, mean, standard deviation, mean of scores, total scores and ranges and inferential statistical data analysis approach of analysis of t-test, analysis of variance, multiple linear regression

**Results:** The results of the study have indicated that most of the primigravida pregnant women have experienced moderate level of perceived stress during the first trimester of their pregnancy (79%). Also, the results of the study revealed that there is no relationship between perceived stress and socio-demographic characteristics.

**Conclusion:** The study concluded that it confirms that primigravida pregnant women can develop perceived stress during the first trimester of pregnancy and primigravida pregnant women's perceived stress is not influenced by the discrepancies in their demographic characteristics and their spouses' demographic characteristics as well.

**Recommendations:** The study recommended that the early detection and management of stress during pregnancy are important to deal with perceived stress among primigravida pregnant women, health education programs, targeting the reduction of stress during pregnancy, may help to reduce its potential adverse health effects on the mother and child, counselling service can be activated and motivated for the benefits of both the primigravida pregnant women and their families throughout the family-centered primary healthcare centers, Further research can be conducted on the same topic with respect to large sample size and wide-range scale of characteristics.

**Key words:** Evaluation, Primigravida, Perceived Stress, Pregnancy



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## Introduction:

Gestation refers to the period of time where a fetus or pregnancies grows inside a mother. Pregnancy is the condition in which one or more children are growing and developing within a woman's uterus as a result of fertilization. An embryo or fetus is the prenatal offspring during pregnancy (also known as the conceptus). When a woman becomes pregnant with more than one child, this is known as a multiple pregnancy (1).

Three trimesters of pregnancy, each lasting around three months long, are used to track a woman's pregnancy. A baby is conceived when sperm fertilizes an egg in the first trimester of a woman's pregnancy. Finally, after fertilization, the fertilized egg travels via the Fallopian tube and enters into the uterus, where it begins to become the embryo and placenta, respectively. (2).

During the prenatal period, all aspects of newborn development are critical, and events that interrupt these processes during pregnancy can have long-term negative consequences for infant and child health. (3).

Negative maternal health outcomes (e.g., gestational hypertension), birth outcomes (e.g., preterm birth), and child health outcomes have all been linked to prenatal maternal psychosocial stress (e.g., cognitive development) (4).

## Methodology:

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The sample was Convenient, non-probability, sample of (300) primigravida pregnant woman who are recruited from (10) main, (10) sub and

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The questionnaire was designed as an instrument for collecting data through the use of the Self-report questionnaire was constructed for the purpose of the study. The study instrument was constructed through review of relevant literature, the questionnaire which consisted of two main parts. The first part relates to the primigravida pregnant women socio-demographic characteristics (such as age, woman's education, woman's occupation, spouse's education, spouse's occupation, pregnancy woman's medical history, monthly income) and the second part relates to the stressors that cause primigravida's perceived stress. This part is comprised of (70) item that evaluate primigravida pregnant women's perceived stress during pregnancy these items are distributed throughout (6) dimensions that include physical stressors (20) items, cognitive stressors (11) items, social stressors (16) items, emotional stressors (8) items, behavioral stressors (9) items and financial stressors (6) items. All items are measured on 3-level type Likert scale of never = 1, sometimes = 2 and always = 3.

A pilot study was carried out for the period of November 4th through December 14th 2020 in order to determine the validity and reliability of the study instrument to (12) primigravida pregnant women. The internal consistency reliability of the questionnaire was determined by using the Cronbach Alpha test, and the content validity of the questionnaire was determined throughout panel of (12) experts.

The data were collected through the use of the study instrument as mean of data collection and analyzed using the descriptive statistical data analysis approach of frequency, percentage, mean, mean of scores, total scores and ranges and inferential statistical data analysis approach of multiple linear regression

## RESULTS

Table (1): Primigravida Pregnant Women's Socio-demographic Characteristics

<i>List</i>	<i>Characteristic</i>	<i>Frequency</i>	<i>Percent</i>
<i>1</i>	<i>Age (Years)</i> 16-20 21-25 26-30	120 139 41	40 46.33 13.67
<i>2</i>	<i>Women's Education</i>  1. Do not read or write  2. Reads and writes  3. Elementary school graduate  4. Middle school graduate  5. High school graduate  6. Institute graduate  7. College graduate  8. Postgraduate	  4 11 25 63 119 40 37 1	  1.33 3.67 8.33 21 39.67 13.33 12.33 0.33
<i>3</i>	<i>Women's Occupation</i> 1. Government Employee 2. Self-employed 3. Retired 4. Housewife	253 23 0 24	84.33 7.67 0.0 8
<i>4</i>	<i>Spouse's Education</i>  1. Do not read or write  2. Reads and writes  3. Elementary school graduate  4. Middle school graduate  5. High school graduate  6. Institute graduate  7. College graduate  8. Postgraduate	    0 3 5 83 116 50 42 1	    0.0 1 1.67 27.67 38.67 16.67 14 0.33
<i>5</i>	<i>Spouse's Occupation</i> 1. Government employee 2. Self-employed 3. Retired 4. Out of work	165 78 0 57	55 26 0.0 19

6	<b>Medical History</b> 1. Hypertension 2. Gestational Diabetes 3. Eclampsia 4. Bleeding 5. Anemia	7 10 1 7 28	2.33 3.33 0.33 2.33 9.33
7	<b>Monthly Income</b> 1. Less than 300,000 Iraqi dinars 2. 301,000 - 600,000 Iraqi dinars 3. 601,000 - 900,000 Iraqi dinars 4. 901,000 - 1,200,000 Iraqi dinars 5. 1,201,000- 1,500,000 Iraqi dinars 6. More than 1,500,000 Iraqi dinars	164 64 34 22 16 0	54.67 21.33 11.33 7.33 5.33 0.0

Results, out of this table, depict the most of the primigravida pregnant women are (21-25) year old; high school graduates; government employees; their spouse's education is accounted for high school graduates and their spouse's occupation is accounted for government employees; having anemia as a medical history;

and making a monthly income of less than (300) thousand Iraqi dinar.

Table (2): Overall Evaluation of Primigravida Pregnant Women's Perceived Stress

at First Pregnancy Trimester

Mild (70-116.66)	Moderate (116.67-163.33)	Severe (163.34 -210)
0(0.0%)	237 (79%)	63 (21%)

Results, out of this table, indicate that most of the primigravida pregnant women have experienced moderate level of perceived stress during the first trimester of their pregnancy (79%).

Characteristics and Primigravida Pregnant Women's Perceived Stress

at First Pregnancy Trimester

Table (3): Relationship between Pregnant Women's Socio-demographic

Model	Sum of Squares	Degree of Freedom	Mean Square	F-Statistics	Significance
Regression	.081	7	.012	2.092	.064
Residual	.248	45	.006		
Total	.329	52			
a. Dependent Variable: Pregnant Women's Perceived Stress					
b. Predictors: (Constant), Monthly Income, Spouse's Education, Medical History, Women's Occupation, Women's Education, Age, Spouse's Occupation					

**Results, out of this table, depict that there is no significant relationship between primigravida pregnant women's perceived stress and their socio-demographic characteristics at the first trimester of pregnancy.**

## **Discussion:**

### **Part I: Discussion of the Primigravida Pregnant Women's Socio-demographic**

#### **Characteristics**

Analysis of such characteristics depicts that these primigravida pregnant women are at young age adults with moderate level of education and government employees. Anemia is found to be accounted for the most of them as an indicator of their medical history and those who are coming from income families are making higher proportion among them. Such findings present evidence about the reality of pregnant women in our culture.

With respect to their spouses' characteristics, the study indicates that most of them have moderate education and they are working as government employees. Such findings provide an indication about the reality and the nature of their lives.

A cross-sectional research of 376 pregnant women revealed that gestational age of less than 12 weeks, low socioeconomic position, being under 20 years old, being unmarried, having little education, and having little social support were all linked to reported stress <sup>(5)</sup>.

Another cross-sectional research was done to assess the reported stress of pregnant women who visited a tertiary care hospital's outpatient facility for frequent prenatal check-ups. In multivariate analysis, the study discovered that unexpected pregnancy and husband's work status were connected with high levels of reported stress in this group of women <sup>(6)</sup>.

### **Part II: Discussion of the Primigravida Pregnant Women's Perceived Stress during**

#### **Pregnancy**

Throughout the course of data analysis, the study has confirmed that primigravida pregnant women have experienced perceived stress during their pregnancy. Such stress has started or initiated and noticed at the first trimester of pregnancy. Such evidence has been manifested in the total scores and the mean of scores on items of perceived stress dimensions of physical

stressors, cognitive stressors, social stressors, emotional stressors, behavioral stressors and financial stressors.

A descriptive study of (100) pregnant women found that it was found that majority of (70%) of the primigravida mothers had moderate level stress, (18%) had severe level of stress and (12%) of the primigravida mothers had mild level stress <sup>(7)</sup>.

The incidence of prenatal stress in early pregnancy was shown to be high in a cohort study of 1220 pregnant women (91.86 percent) <sup>(8)</sup>.

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Another cross-sectional research was done to assess the reported stress of pregnant women who visited a tertiary care hospital's outpatient facility for frequent prenatal check-ups. The majority of the patients (57.7%) were primigravida, with a mean felt stress score of (13.5±5.02). On the felt stress scale, the majority of the participants (102; 65.4 percent) scored higher than the mean total score. In this group of women, unplanned pregnancy and husband's work status were linked to high levels of reported stress in multivariate analysis <sup>(6)</sup>.

### **Part III: Discussion of the Relationship between Primigravida Pregnant Women's**

#### **Perceived Stress and Their Socio-demographic Characteristics**

Analysis of such relationships indicate that primigravida pregnant women's perceived stress has not been influenced by their socio-demographic characteristics. Such findings can be logically interpreted in a way that perceived stress can be originated as a result of being pregnant at the first time.

A descriptive study of (100) pregnant women found that there is significant association between the level of stress and selected demographic variables, such as duration of married life of the respondents  $\chi^2 = 5.08$  ( $P < 3.84$ ), is this pregnancy planned or unplanned of the respondents  $\chi^2 = 9.89$  ( $P < 9.49$ ) at (0.05) level of significance. The result noted that there is significant association between the Coping mechanism and selected demographic variables such as age of the respondents  $\chi^2 = 10.04$  ( $P < 9.49$ ), religion of the respondents  $\chi^2 = 5.57$  ( $P < 5.99$ ), education of the respondents  $\chi^2 = 9.33$  ( $P < 7.81$ ), occupation of the respondents  $\chi^2 = 20.94$  ( $P < 11.1$ ), and duration of married life of the

respondents  $\chi^2 = 13.46$  ( $P < 0.05$ ) at (0.05) level of significance<sup>(8)</sup>.

Perceived stress symptoms were shown to be substantially linked with divorce ( $p=0.001$ ), separation from spouse ( $p=0.005$ ), physical or psychological trauma from family ( $p=0.005$ ), marital conflict ( $p=0.001$ ), and family conflict ( $p=0.001$ ) in a cross-sectional research of 403 pregnant women. Multiple logistic regression results revealed that marital conflict (AOR 3.10, 95 percent CI 1.74– 5.52,  $p=0.001$ ) and family conflict (AOR 3.24, 95 percent CI 1.59– 6.60,  $p=0.001$ ) were significant predictors of subjective stress symptoms in pregnant women.<sup>(8)</sup>

Another cross-sectional study of 376 pregnant women found that gestational age fewer than (12) weeks was associated with reported stress (AOR = 3.53; CI 1.03, 12.08). Women with high levels of stress are more likely to be from a low socioeconomic standing, to be under the age of twenty, to be single, to have less than a grade eleven education, and to lack good social support.<sup>(5)</sup>

A cohort study of 1220 pregnant women found that housewife/unemployment, anxiety, and low and moderate levels of social support are risk factors for prenatal stress, while exercise, active smoking, and no parental advice are protective variables.<sup>(9)</sup>

### Conclusion:

The study concluded that primigravida pregnant women can experience perceived stress throughout the first trimester of pregnancy, and that their experienced stress is unaffected by differences in their demographic characteristics or the demographic characteristics of their spouses.

### Recommendations:

Early detection and management of stress during pregnancy are important to deal with perceived stress among primigravida pregnant women, health education programs aimed at reducing stress during pregnancy may help to reduce its potential negative health effects on the mother and child, and counseling services can be activated and motivated for the benefit of both primigravida pregnant women and their families throughout the family, according to the study.

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