

Evaluation of Primigravida Pregnant Women Perceived Stress during Second Trimester of Pregnancy

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ABSTRACT

Objective: To evaluate primigravida pregnant women's perceived stress during the first trimester of pregnancy and to compare between these women relative their perceived stress and pregnancy trimesters, 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 Primigravida 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 the majority of the primigravida pregnant women have experienced high level of perceived stress during the second trimester of their pregnancy (90.3%). 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 second trimester of pregnancy, the perceived stress can be elevated as far the pregnancy is emerging and progressing, primigravida pregnant women's perceived stress is no 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.

Keywords: Evaluation, Primigravida, Perceived Stress, Pregnancy

INTRODUCTION

The risk of miscarriage (the natural demise of an embryo or baby) is highest during the first trimester. Movement of the fetus can be felt towards the middle of the second trimester. If given high-quality medical care at 28 weeks, more than 90% of kids can live outside the uterus, while babies born at this time are more likely to have major health problems, such as diabetes⁽¹⁾.

Stress is a complex pattern of the human physiology's response to a stressful circumstance. It is the way we perceive and respond to risks and difficulties in our environment⁽²⁾.

A few studies looking into how maternal stress may be linked to pregnancy complications like preeclampsia and gestational diabetes have found that stress may contribute to the development of pregnancy-related hypertension and frank preeclampsia, as well as complicate the effects of gestational diabetes⁽³⁾.

During pregnancy, maternal psychosocial stress is linked to risks to mother health and birth outcomes. From a psychoneuroimmunology approach, ongoing research is aimed at determining how and when prenatal stress impacts pregnancy, as

well as the mechanisms of these effects. This study builds on earlier research into the links between stress and bad outcomes to look into the mechanisms that lead to prematurity, preeclampsia, low birth weight, and other suboptimal pregnancy outcomes⁽⁴⁾.

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.

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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

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.

Results, out of this table, show that the majority of the primigravida pregnant women have experienced high level of perceived stress during the second trimester of their pregnancy (90.3%).

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

List	Characteristic	Frequency	Percent	
1	Age (Years)			
	16-20	120	40	
	21-25	139	46.33	
2	Women's Education			
	1. Do not read or write	4	1.33	
	2. Reads and writes	11	3.67	
	3. Elementary school graduate	25	8.33	
	4. Middle school graduate	63	21	
	5. High school graduate	119	39.67	
	6. Institute graduate	40	13.33	
	7. College graduate	37	12.33	
	8. Postgraduate	1	0.33	
3	Women's Occupation			
	1. Government Employee	253	84.33	
	2. Self-employed	23	7.67	
	3. Retired	0	0.0	
4	Spouse's Education			
	1. Do not read or write	0	0.0	
	2. Reads and writes	3	1	
	3. Elementary school graduate	5	1.67	
5	Spouse's Occupation			
	1. Government employee	165	55	
	2. Self-employed	78	26	
	3. Retired	0	0.0	
	4. Out of work	57	19	
	6	Medical History		
		1. Hypertension	7	2.33
		2. Gestational Diabetes	10	3.33
3. Eclampsia		1	0.33	
4. Bleeding		7	2.33	
7	Monthly Income			
	1. Less than 300,000 Iraqi dinars	164	54.67	
	2. 301,000 - 600,000 Iraqi dinars	64	21.33	
	3. 601,000 - 900,000 Iraqi dinars	34	11.33	
	4. 901,000 - 1,200,000 Iraqi dinars	22	7.33	
	5. 1,201,000 - 1,500,000 Iraqi dinars	16	5.33	
6. More than 1,500,000 Iraqi dinars	0	0.0		

Table 2: Overall Evaluation of Primigravida Pregnant Women's Perceived Stress at Second Pregnancy Trimester

Mild (70-116.66)	Moderate (116.67-163.33)	Severe (163.34 -210)
0 (0.0%)	29 (9.7%)	271 (90.3%)

Table 3: Relationship between Pregnant Women's Socio-demographic Characteristics and Primigravida Pregnant Women's Perceived Stress at Second Pregnancy Trimester of Pregnancy

Model	Sum of Squares	Degree of Freedom	Mean Square	F-Statistics	Significance
Regression	.124	7	.018	1.325	.261
Residual	.602	45	.013		
Total	.726	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 second 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 study of (376) pregnant women found that gestational age of less than (12) weeks, low socioeconomic status, less than (20) years of age, being single, low education and poor social support were associated with perceived stress among pregnant women (2).

Another cross-sectional study has been conducted to evaluate perceived stress of pregnant women attending the outpatient services of a tertiary care hospital for regular antenatal check-up. The study found that unplanned pregnancy and husband's employment status were associated with high levels of perceived stress in multivariate analysis in this set of women (6).

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 been upsurged at the second trimester of pregnancy with a reasonable increase that has been noticed. 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⁽⁶⁾. A cross-sectional study of a total of (403) pregnant women found that the prevalence of perceived stress symptoms in antenatal pregnant women was (23.6%)⁽⁷⁾.

In a cohort study of (1220) pregnant woman, the findings indicate that the prevalence of prenatal stress in early pregnancy was (91.86%)⁽⁸⁾.

Another cross-sectional study has been conducted to evaluate perceived stress of pregnant women attending the outpatient services of a tertiary care hospital for regular antenatal check-up. Among the total patients (57.7%) were primigravida and the mean score on perceived stress scale was (13.5±5.02). The majority of the group (102; 65.4%) scored higher than the mean value of total score on the perceived stress scale. Unplanned pregnancy and husband's employment status were associated with high levels of perceived stress in multivariate analysis in this set of women⁽⁵⁾.

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 $\chi^2 = 13.46$ ($P < 12.6$) at (0.05) level of significance⁽⁶⁾.

A cross-sectional study of a total of (403) pregnant women found that perceived stress symptoms were significantly associated 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 ($p < 0.001$). Results from multiple logistic regression found that significant predictive factors for perceived stress symptoms in pregnant women were marital conflict (AOR 3.10, 95% CI 1.74– 5.52, $p < 0.001$) and family conflict (AOR 3.24, 95% CI 1.59– 6.60, $p = 0.001$)⁽⁷⁾.

Another cross-sectional study of (376) pregnant women found that gestational age less than (12) weeks (AOR = 3.53; CI 1.03, 12.08) were associated with perceived stress among

pregnant women. Women who experience high levels of stress are more likely to be from low socioeconomic status, less than (20) years of age, being single, have less than grade (11) of education and have no good social support⁽²⁾.

A cohort study of (1220) pregnant woman revealed that the risk factors for prenatal stress include housewife/unemployment, presence of anxiety and low and moderate level of social support, besides, the protective factors were exercise, active smoking and no suggestion from parents⁽⁸⁾.

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.

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