

## Depression among Pregnant Women of Displaced Families in Kirkuk Governorate

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### Abstract:

**Background:** Major depression is twice more common in women than in men and frequently clusters during the childbearing years. Depression is one of the most common complications in pregnancy. Displacement with the whole family correlated with: heavier depressive disorder in general, deeper depressive mood, higher suicidality rate and poor sense of efficacy.

**Objectives:** The aim of the study is to determine the frequency of depressive disorder among pregnant women of displaced families.

**Patients and Methods:** This study consists of 88 pregnant women of any gestational age, of displaced families from four governorates which are Diyala, Salahuddin, Nineveh and Al-Anbar and from Al-Hawija District which is a district of the Kirkuk governorate, where armed groups have taken control of all these areas, compared with 88 control pregnant of indigenous families, matched for sociodemographic, age, parity, gestational age and educational background. The clients selected randomly from primary health care centers in Kirkuk city. The study was conducted during the period between, October 2014 and July 2015. The Edinburgh postnatal depression scale (EPDS) was used to detect prenatal depression.

**Results:** The highest frequency of depressive symptoms with significant difference ( $p$ -value<0.001) were among pregnant women of displaced families (48.86%) than pregnant women of indigenous families (22.7%).

**Conclusion:** According to the findings of this study, about (48.86%) of pregnant women of displaced families experience depressive disorder during antenatal period. Given the potential impact of antenatal mental disturbances on maternal and infant outcomes.

**Key words:** Pregnant, Depression, Displaced families, Kirkuk governorate.

### Introduction:

Kirkuk governorate is a governorate in northern Iraq; the provincial capital is the city of Kirkuk. From 1976 to 2006, it was named At-Ta'mim Governorate which means "socialism" and refers to the national ownership of the regional oil and natural gas reserves. Prior to 1976 it had been named Kirkuk governorate. In 2006 the name "Kirkuk governorate" was restored<sup>(1)</sup>. Displace means force someone to leave their home, typically because of war, persecution, or natural disaster<sup>(2)</sup>.

Depression is defined as the loss of pleasure or negative mood combined with a set of symptoms, which last more than two weeks and causes impairment in some or several areas of life<sup>(3)</sup>. Depression is a leading cause of disability worldwide<sup>(4)</sup>. Major depression is twice more common in women than in men and frequently clusters during the childbearing years. Although pregnancy has traditionally been considered a time of emotional well-being for women conferring

protection against psychiatric disorders, at least one prospective study describes rates of major and minor depression as approximating (10%)<sup>(5, 6)</sup>.

Pregnant women may have many clinical signs and symptoms overlapping with those seen in major depression (e.g. sleep, appetite disturbance, diminished libido, and low energy)<sup>(7, 8)</sup>. Some medical disorders commonly seen during pregnancy, such as anemia, gestational diabetes, and thyroid dysfunction, may be associated with depressive symptoms and may complicate the diagnosis of depression during pregnancy<sup>(7, 8)</sup>.

Pregnancy either induces or exacerbates stress and in turn stress seems to have a negative effect on pregnancy, especially in the first trimester<sup>(9)</sup>. The period of greatest stress during pregnancy, the first trimester, is also the period of the highest rate of pregnancy loss<sup>(9)</sup>.

Depression is one of the most common complications in pregnancy. As many as (12.7%) of pregnant women experience a major depressive disorder<sup>(10)</sup>. Several professional organizations now recommend routine screening for antepartum depression<sup>(11, 12)</sup>. In fact, the American College of Obstetricians and Gynecologist (ACOG) recommends screening for depression during each trimester of pregnancy<sup>(11)</sup>. Maternal anxiety, life stress, history of depression, lack of social support, unintended pregnancy, Medicaid insurance, domestic violence, lower income, lower education, smoking, single status, and poor relationship quality were associated with a greater likelihood of antepartum depressive symptoms in bivariate analyses<sup>(13)</sup>. Stressful life events precede or alleviate the appearance of a depressive disorder. The incidence of negative life events is much more frequent during war. The

population is exposed to life threatening situations, material losses and gross migration shifts. Exile presents one of the most severe forms of psychological stress. Due to concurrent endangerment of existence, psychosomatic health problems and reduces social standing among refugees are exposed to accumulated stress<sup>(14, 15)</sup>.

Refugees were considered a risk group for development of depressive disorder. Psychiatric disorders which are present in the early stage of displacement are possible predictors of chronic impairment of mental health and disability<sup>(14, 15)</sup>. Displacement with the whole family correlated with: heavier depressive disorder in general, deeper depressive mood, higher suicidality rate and poor sense of efficacy<sup>(16)</sup>.

By recognizing all risk factors associated with the sensitive refugee group, early diagnosis of psychiatric disorders (depression in the place), followed by appropriate treatment, the risk of chronification and complication of depression as well as of poor social adaptation could be significantly decreased<sup>(16)</sup>.

The aim of the study is to determine the frequency of depressive disorder among pregnant women of displaced families.

### **Patients and Methods:**

This study consists of 88 pregnant with any gestational age, of displaced families from four governorates which are Diyala, Salah Uddin, Nineveh and Al-Anbar and from Al-Hawija District, which is a district of the Kirkuk governorate, where armed groups have taken control of all these areas, compared with 88 control pregnant of indigenous families, matched for sociodemographic, age, parity, gestational age and educational background. The clients selected randomly from primary health care

centers in Kirkuk city, who were receiving antenatal check-up including, physical examination, reassurance, blood pressure measurement, blood and urine test and education. The study was conducted during the period between, October 2014 and August 2015. Patients suffering from previous psychiatric disorders, taking psychotropic or steroids and pregnant patients with chronic medical disorders e.g. hypertension, diabetes mellitus and cardiovascular problems were not included in this study. A questionnaire was administered by both groups to collect data. A valid, reliable, economical screening tool, the Edinburgh postnatal depression scale (EPDS) was used to detect prenatal depression<sup>(17)</sup>. This scale was developed in 1987 to act as a specific measurement tool to identify depression in new mothers and has been validated as an antenatal screening tool<sup>(18)</sup>. This scale is a 10 item self-reporting scale. An individual can score maximum of thirty points. A cutoff score of 12 was used to identify depression. Basic demographic information included age, gestational age, parity, employment status, original residence (of the displaced families), family history of psychiatric disorders and educational level were all recorded. Descriptive statistical analysis was done by, mean  $\pm$  standard deviation (SD), frequency and percentage. Statistical analysis was performed using SPSS version 17, levels of statistical significance differences for depressive disorder were obtained between the two groups. P values less than 0.05 were considered significant.

#### **Ethical Approval:**

The research and ethics committee of Kirkuk medical college approved this study protocol. All participants in this study were informed about the scope

and the purpose of this study. Pregnant women were also assured that the collected data would be used only for the purpose of the study and that their decision to withdrawn would not compromise the standard of the received care. Verbal consent was obtained from all subjects after full explanation of the study procedure.

#### **Results:**

The study included two samples, a study sample of pregnant women from displaced families consist of 88 pregnant with a mean age 26.9 years (standard deviation; SD=  $\pm$ 8.9) and a controlled sample of pregnant women from indigenous families consist of 88 pregnant with a mean age 29.6 years (standard deviation; SD=  $\pm$ 7.4). The sociodemographic characteristics of the pregnant women from displaced families are shown in the (table 1). The majority of the pregnant women were in age group between 21-31 (50%) years, multigravida (59.1%), with gestational age of 3rd trimester (64.8%), educational level of illiterate and primary schools (40.9%) and housewife (75%).

The sociodemographic characteristics of the controlled group are shown in (table 2). In which the high frequency were in age group between 25-31 (54.5%) years, multigravida (61.4%), with gestational age of 3rd trimester (64.8), educational level of secondary schools (36.4%) and housewife (63.6%).

(Table 3) shows depressive symptoms among pregnant women of indigenous families. There was no significant difference (p - value  $>$ 0.05) of depression among age groups, parity and gestational age of pregnancy, while there was a high frequency of depressive symptoms among educational level of illiterate and primary schools (38.5%) with high significant difference than other educational levels

groups (p-value<0.002) and also, the table shows a high frequency of depressive symptoms among housewife (30.4%) with significant difference (p-value <0.001) than employment (10%). (Table 4) shows depressive symptoms among pregnant women of displaced families. There was no significant difference (p - value>0.05) of depression among age groups, parity and gestational age of pregnancy, while there was a high frequency of depressive symptoms among educational level of illiterate and primary schools (61.1%) with high significant difference than other educational levels

groups (p-value<0.006) and there was also a high frequency of depressive symptoms among housewife (57.6%) with significant difference (p-value = <0.001) than employment (22.7%). (Table 5) shows the frequency of depression among pregnant women of both indigenous and displaced families. The highest frequency of depressive symptoms with high significant difference (p-value = <0.003) were among pregnant women of displaced families (48.86%) than pregnant women of indigenous families (22.7%).

**Table (1):** Sociodemographic characteristic of the pregnant of displaced families.

<b>Variables</b>	<b>No.</b>	<b>%</b>
<b>Age (years)</b>		
< 20	18	20.5
21-31	44	50
>31	26	29.5
<b>Parity</b>		
Primigravida	20	22.7
Multigravida	52	59.1
Grandmultigravida	16	18.2
<b>Gestational age</b>		
1 <sup>st</sup> trimester	15	17
2 <sup>nd</sup> trimester	16	18.2
3 <sup>rd</sup> trimester	57	64.8
<b>Education</b>		
Illiterate and Primary schools	36	40.9
Secondary schools	30	34.1
Institutions and colleges	22	25
<b>Occupation</b>		
Employment	22	25
Housewife	66	75
<b>Original Residence</b>		
Diyala	18	20.5
Salah Uddin	23	26
Nineyveh	10	11.4
Al-Anbar	22	25
Al-Hawija	15	17

**Table (2):** Sociodemographic characteristic of the controlled group.

Variables	No.	%
<b>Age (years)</b>		
< 24	14	15.9
25-31	48	54.5
>31	26	29.5
<b>Parity</b>		
Primigravida	21	23.9
Multigravida	54	61.4
Grandmultigravida	13	14.8
<b>Gestational age</b>		
1 <sup>st</sup> trimester	18	20.5
2 <sup>nd</sup> trimester	16	18.2
3 <sup>rd</sup> trimester	54	61.3
<b>Education</b>		
Illiterate and Primary school	26	29.5
Secondary school	32	36.4
Institutions and college	30	34.1
<b>Occupation</b>		
Employment	32	36.4
Housewife	56	63.6

**Table (3):** Depressive symptoms among pregnant women of indigenous families.

Variables	Frequency of depression (%)	p-value
<b>Age (in years)</b>		
< 24 (n=14)	4 (28.6%)	>0.05
25-31(n=48)	10 (20.8)	
>31(n=26)	6 (23)	
<b>Parity</b>		
Primigravida (n=21)	5(23.8%)	>0.05
Multigravida (n=54)	12(22.2%)	
Grandmultigravida (n=13)	3(23)	
<b>Gestational age</b>		
1 <sup>st</sup> trimester (n=18)	4 (22.2%)	>0.05
2 <sup>nd</sup> trimester(n=16)	4 (25)	
3 <sup>rd</sup> trimester (n=54)	12 (22.2)	
<b>Education</b>		
Illiterate and primary school (n=26)	10 (38.5)	<0.002
Secondary school (n=32)	7 (21.9)	
Institutions and college (n=30)	3 (10)	
<b>Occupation</b>		
Employment (n=30)	3 (10)	<0.001
Housewife (n=58)	17 (30.4)	
<b>Total= 88</b>	<b>20 (29.3)</b>	

**Table (4):** Depressive symptoms among pregnant women of displaced families.

Variables	Frequency of depression (%)	p-value
<b>Age (years)</b>		
< 20 (n=18)	9(50)	>0.05
21-31 (n=44)	21(47.7)	
>31 (n=26)	13(50)	
<b>Parity</b>		
Primigravida (n=20)	10 (50)	>0.05
Multigravida (n=52)	25(48)	
Grandmultigravida (n=16)	8 (50)	
<b>Gestational age</b>		
1 <sup>st</sup> trimester (n=15)	7(46.7)	>0.05
2 <sup>nd</sup> trimester (n=16)	8 (50)	
3 <sup>rd</sup> trimester (n=57)	28 (47.4)	
<b>Education</b>		
Illiterate and Primary school (n=36)	22 (61.1)	<0.006
Secondary school (n=30)	16 (53.3)	
Institutions and college (n=22)	5 (22.7)	
<b>Occupation</b>		
Employment (n=22)	5(22.7)	<0.001
Housewife (n=66)	38 (57.6)	
<b>Total = 88</b>	<b>43(48.9)</b>	

**Table (5):** Frequency of depression among pregnant of the displaced and indigenous families.

Study and controlled samples	Frequency of depression (%)	p-value
Depression among pregnant of displaced families	43(48.86)	<0.003
Depression among pregnant of indigenous families	20 (22.7)	

**Discussion:**

According to the author's knowledge, this is the first study about depression in pregnant women of displaced families which was done in Iraq.

Our finding of (22.7%) of pregnant women from indigenous families is in agreement with previous studies<sup>(19-21)</sup>. A previous study which was done at University of Michigan, USA which included nearly 3500 Michigan women found one in five pregnant women may experience symptoms of depression during pregnancy<sup>(19)</sup>. (21.3%) of pregnant women were reported in previous study which was done in

Karachi<sup>(20)</sup>. But our results were different from previous study in which (39%) of pregnant woman were depressed<sup>(22)</sup>. This difference may be due to the screening and diagnostic instruments used in that study that varies in sensitivity and due to the sample size. A second reason for the variability in finding is that the study assessed women at different time points. According to our results, in displaced and indigenous families (table 3 and 4), there was no significant difference (p-value >0.05) among depression within different age groups, parity and gestational age of

pregnancy and this is similar to previous study<sup>(19)</sup>. This means that depression occurs irrespective of any of these variables and should be looked for in all prenatal clients. Both tables (3 and 4) show a high frequency of depression among housewives with high significant difference in both indigenous and displaced families (p-value <0.001) (30.4% and 57.6%) than employments (10% and 22.7%) respectively. The explanation is that unemployment has been associated with depression in the general population (Stankunas, Kalediene, Starkuviene, & Kapustinskiene, 2006)<sup>(23, 24)</sup>, also poverty and unemployment considered as risk factors for depression in pregnant women during antenatal period<sup>(13)</sup>. This study also shows a high frequency of depressive symptoms in illiterate and primary schools of educational levels in both indigenous and displaced families, (38.5% and 61.1% respectively) with high significant differences (p-value <0.002 and p-value <0.006) than high educational levels (10% and 22.7% respectively) as shown in both tables (3 and 4) and this goes with the result of other study in which there is an association between low educational level and antepartum depression<sup>(25)</sup>.

(Table 5) shows a high frequency of depression in pregnant women of displaced families (48.86%) with high significant difference (p-value <0.003) than in indigenous families (22.7%). As displaced families are exposed to a much of negative life events and the incidence of negative life events is much more frequent during war. These displaced families are exposed to life threatening situations, material losses and gross migration shifts. Exile presents one of the most severe forms of psychosocial stress. Due to concurrent

endangerment of existence, psychosomatic health problems and reduces social standing among refugees are exposed to accumulated stress. Essential psychological characteristics concerning experience of exile is loss, because loss of home is very detrimental to health. Home constitutes the basic security of every person, providing one with identity, privacy and family unit. Therefore the loss of home is actually a loss of one's security, confidence and faith in oneself (Kendler et al. 1995<sup>(26)</sup>, Fullilove 1996<sup>(27)</sup>). Many studies assessed life stress as a potential predictor of antepartum depression<sup>(28-31)</sup>. Also many other studies assessed total social support from any sources. On average, these studies demonstrated a medium correlation between a lack of social support and depressive symptoms<sup>(32-34)</sup>. As these families exposed to displacement, their pregnant may be experienced a lack of support and intimate relationships with their partners. Many studies showed an association between depression and lack of intimate relationships<sup>(35-36)</sup>. This percentage of depression among pregnant women of displaced families (48.86%) is less than the author expected in comparison with exposed negative life stresses and the size of disaster and destruction that they have been subjected to it. The first explanation, In our research female patients seem to be underestimated their total depressive experience, probably due to interpreting possible symptoms as due to the difficult social situation in exile and the second explanation, that the somatic symptoms of depression during pregnancy such as changes in sleep and appetite, diminished libido and low energy, according to these pregnant women, may be attributed to normal pregnancy.

## **Conclusion:**

According to the findings of this study, about (48.86%) of pregnant women of displaced families experience depressive disorder during antenatal period. Given the potential impact of antenatal mental disturbances on maternal and infant outcomes. The necessities of screening program for depressive disorders during pregnancy and offering treatment for more severe cases with either psychotherapy or medications may be important for both the mother and the future well-being of the child and the family.

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