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Prevalence of Anxiety among Pregnant Women Attending Antenatal care in Jordan: A Single Center Study

Asma Sa'd Basha[1], Caroline Sameer Sabanekh[2], Laith Khader Shlash[3], Lujain Nezar Dawod[4], Murad Munzer Dweik[5], Mohammed Nathir Obeidat[6], Lna Malkawi[7], Saif Aldeen AlRyalat[8]

1. Department of Gynecology, School of medicine, the University of Jordan.
2. Medical student, school of medicine, The University of Jordan.
3. Medical student, school of medicine, The University of Jordan.
4. Medical student, school of medicine, The University of Jordan.
5. Medical student, school of medicine, The University of Jordan.
6. Medical student, school of medicine, The University of Jordan.
7. Department of Radiology, School of medicine, The University of Jordan.
8. Department of Special Surgery, School of medicine, The University of Jordan.

ABSTRACT

Background: Pregnancy is a stressful physiological period, where some women may suffer from some degree of anxiety. Our aim is to study the prevalence of anxiety among pregnant women attending routine antenatal care clinics.

Methodology: This was a cross sectional study for pregnant women coming for their routine antenatal care at Jordan University Hospital, during the period from October 1st to 27th, 2019.They were interviewed while waiting for their turn by a trained 6th year medical student using the Generalized Anxiety Disorder -7 (GAD-7) questionnaire.

Results: A total of 200 women were interviewed with a mean age of 30 ± 5.3years, ranges between (18 and 45years). Their gravidity mean was 3.3±2.9 (ranges from 0-22) and their mean parity was 1.6 ± 1.4. 59 women (29.5%) had previous history of miscarriage. Number of miscarriages ranged from 1 to 12 with a mean of 2.5 ± 3.3.In our study, 66 (33.0%) women had moderate and 42 (21.0%) had severe symptoms. For women with history of previous miscarriages, there was no significant correlation with anxiety, except for those with recurrent miscarriages (p-value= 0.019).

Conclusions: Recurrent miscarriage can affect women's psychological well-being; with an increase in the possibility of experiencing anxiety. Implementing mental health assessment in antenatal care has long-lasting benefits for both mother and infant.

Keywords: Pregnancy, Anxiety, miscarriage.

INTRODUCTION

Pregnancy and birth are regarded as joyful experience (1).About 10–15 % of all pregnant women experience some degree of anxiety during their pregnancy (2).A prior pregnancy loss is an established risk factor for developing anxiety during future pregnancies (3). The feeling of self-blame that women usually suffer after a miscarriage is associated with high levels of anxiety and depression as well as post-damaging disorder syndrome (4).These women have also higher level of pregnancy-related fear in the next pregnancy(5).Although controversial; the presence of anxiety in a new pregnancy constitutes a risk factor for perinatal complications (1).A woman's ability to adapt to the changes and challenges of pregnancy is unique and varies from one to another(6).The purpose of this

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study was to assess the impact of having previous misscarriege on the anxiety in pregnant women attending prenatal care clinics at our university hospital.

MATERIALS AND METHODS:

Study design

This study is a cross-sectional study performed at the University of Jordan Hospital, a university hospital based in Amman, the capital of Jordan. Patients were recruited from prenatal care clinics at Jordan University Hospital. The study was approved by the Ethics Committee for Medical Research at the Jordan University Hospital and the University of Jordan, and was conducted according the declaration of Helsinki.

Participants

We recruited 200 women during the period extending from October 1st to 27th, 2019.

These women attend the clinic for their routine antenatal care. They were interviewed at the clinic while waiting for their turn by a trained 6thyear medical student. We did not include women who were diagnosed with psychological diseases, or those who were on psychological medications.

Variables

Patients were informed about the study aim prior to initiation of the interview, verbal consent was then obtained. All women who declined to participate were excluded from the study. A structured clinical interview was conducted using the translated and validated version of Generalized Anxiety Disorder-7 (GAD-7), a short screening measures used in medical and community settings to assess depression and anxiety severity (7). They were asked to rate the frequency of anxiety symptoms on a Likert scale ranges from 0-3; 0 for not at all, 1 for several days, 2 for more than half the days and 3 for nearly every day. The total scores ranged from 0 (no anxiety symptoms) to 21 (all symptoms occurring daily). A total score of 0-4 represents minimal or no anxiety symptom from 5-9 is considered mild, 10-14 is moderate and 15-21is severe.

Statistical analysis

Data were analyzed using SPSS 23. Frequency and percentage were calculated for the categorical data. We used Pearson's chi-square test to compare anxiety disorder with each of the included variables, and we used independent sample t-test for continuous data. Fisher exact test was used when the cell is less than5. Significance level was set at $p < 0.05$.

Result:

A total of 200 women were interviewed. Their mean age was 30 ± 5.3years; ranges between18 and 45years. Their gravidity mean was 3.3±2.9; ranges from 0 to 22. 59 women (29.5%) had previous history of miscarriage. Their mean parity was1.6 ± 1.4; ranges from 0 to 6. Number of miscarriages ranged from 1-12with a mean of 2.5 ± 3.3(Table 1).

Regarding other medical illnesses during pregnancy, 5 women (0.25%) had hypertension, 8 women (0.04%) had diabetes mellitus, one woman had both diseases(0.05%) and another one (0.05%) had gestational diabetes mellitus. 14 women (7%) had neonates admitted previously to the neonatal intensive care unit (NICU), 37 (18.5%) had previous one cesarean section(CS), and 14 (7%) with more than one previous CS. Regarding level of education; 16 (8%) had high school degree,121(60.5%) with Bachelors degree,22(11%) had Diploma degree,4 women (2%) had master degree and 2 women (1%) with PHD degree(Table 1).

Regarding anxiety; 32 (16.0%) women had minimal symptoms,60 (30.0%)had mild symptoms, 66(33.0%)had moderate symptoms while42(21.0%)had severe symptoms (Figure 1).No significant correlation was found between degree of anxiety and previous history of miscarriage (Table 2).However, when we divided these women into those who had one previous miscarriage and those with

two or more miscarriages, we noticed that women with recurrent miscarriages had significantly severe anxiety level (p-value = 0.019)(Table 2).

Upon comparing anxiety levels between women who were pregnant for the first time to those who had delivered before (Parity more than one); we did not find any significant deference(Table 2).We did not find significant difference between degree of anxiety and each of mother's age (0.473), level of education (0.50), previous NICU admission (0.755), and previous CS's (0.388).

Discussion

In this study that included a coherent cohort of women from Jordan, with no previous psychological or mental issues, we found a significantly higher anxiety levels among women with prior history of multiple miscarriages. No significant anxiety impact was found forage, level of education, prior gynecological history.

Prenatal mental health concerns are particularly prevalent in Low-Middle Income Countries, where access to mental health services is scarce(8,9).Local studies had shown stigma toward mental illnesses(10-12).Arab cultural traditions, values and beliefs towards mental illnesses are different from those of Westerners(13); The percentage of Arab people who seek psychological help is much lower (5).This study shows our questionnaire's results for prenatal maternal anxiety levels among a sample of Jordanian women attending routine prenatal care clinics. We noticed that 66 women (33%) had moderate anxiety and 42 (21%) had sever anxiety levels in comparison to other studies which showed 15% (14) in one study, 25% and 26.8% (15) in another. A number of factors that may affect the development of pregnancy related anxiety and can subsequently influence maternal mental health, such as: frequent miscarriages, number of parity, socio-economic circumstances and many others (16).

There is an agreement in the literature that women who miscarry may suffer from some morbidity after pregnancy loss and in subsequent pregnancies (16-18). In addition to women having a live child, those who had previous miscarriage appeared to experience severer anxiety symptom (19). A previous study done on Jordanian women found several social factors may lead to anxiety and depression among women after pregnancy, however, the study did not assess those who experienced previous miscarriages (20)

We noticed that having a history of previous miscarriage per se does not significantly correlate with degree of anxiety, however frequent miscarriages(i.e., two or more)is significantly associated with severe symptoms (p value=0.019).Another more recent study also found several predictors for depression and anxiety among women after pregnancy, including family stressors, non-family stressors, education, and life-satisfaction, but they did not assess prior miscarriages history among the predictors (21).

Maternal age was shown to significantly correlate with prenatal anxiety in some countries such as Karachi, Pakistan and China (22), on the contrary this was not significant in our study.

It is noteworthy that we did not find significant relationship between prenatal anxiety and maternal level of education, previous NICU admissions, nor previous CS. Our study is one of few studies which assessed anxiety levels in the antenatal period using standardized scales where the diagnosis was performed following a structured clinical interview. However, the limitation of the study is the small sample size. Moreover, the prevalence of anxiety among pregnant women should be compared with the general population of women who are matched but not pregnant, which would provide important differences between the groups.

Conclusion:

History of multiple miscarriages may affect women's psychological well-being and can aggravate levels of anxiety in subsequent pregnancies. Implementing good mental health assessment in antenatal care clinics has long-lasting benefits for both mother and infant**.**

Table 1- Maternal characteristics

Measure	**Frequency**	**(%)**
Age (years)		
Mean age ± SD	30 ± 5.3	
Range	18-45	
Age group		
15 -24	29	14.5
25 -34	129	61.5
≥ 35	48	24
Level of education		
High school	16	8
Bachelors	121	60.5
Diploma	22	11
Masters	4	2
PHD	2	1
Medical Disease		
HTN	**5**	
DM	8	
DM+HTN	1	
GDM	1	
Gravida		
Mean Gravida± SD	3.3±2.9	
Range	0-22	
Parity		
Mean parity± SD	1.6±1.4	
Range	0-6	
Number of women with Miscarriages	59	29.5
No of miscarriages		
Mean ± SD	2.5±3.3	
Ranges	1-16	
NICU	14	7
CS	52	
No CS	148	74
One CS	37	18.5
≥Two CS	15	7.5

Table 2: Comparison in anxiety disorders for presence of miscarriages; number of miscarriages, and number of parity.

		Minimal or No	Mild	Moderate	Severe	P value
Miscarriage	Yes	5	21	16	17	0.079
	No	27	39	39	39	
Number of Miscarriage	0-1	31	52	59	32	**0.019**
	≥ 2	1	8	7	10	
Number of parity	0	6	19	22	9	0.286
	≥ 1	26	41	44	33	

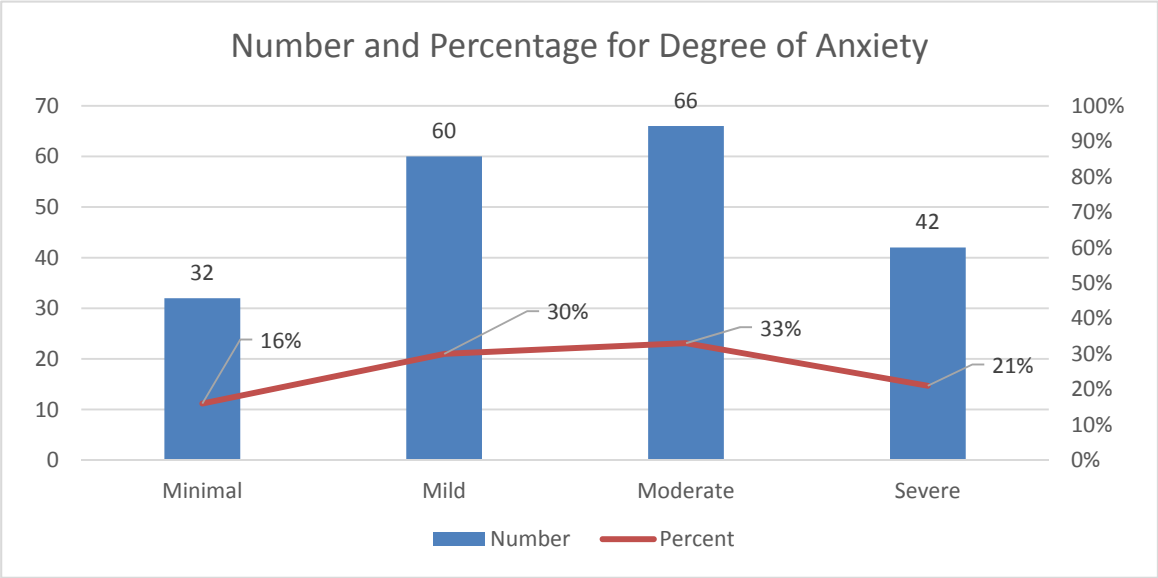

Figure1: Number of patients who suffered anxiety during pregnancy and percentagesof their degree of anxiety

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قلق بين النساءالحوامل اللاتي يتردد نعلى رعاية ما قبل الولادة في الأردن: دراسة مركزية واحدة

أسماء سعد باشا[1]، كارولين سمير سبانخ[2]، ليث خضر شلاش[3]، لجين نزار داود[4]، مراد منذر دويك[5]، محمد نذير عبيدات[6]، لنا ملكاوي[7]، سيف الدين الريالات[8]

1. استاذ مشارك؛ أمراض النساء والتوليد. (الجامعة الأردنية و مستشفى الجامعة الاردنية).
2. طالبة طب ، كلية الطب ، الجامعة الأردنية.
3. طالب طب ، كلية الطب ، الجامعة الأردنية.
4. طالبة طب ، كلية الطب ، الجامعة الأردنية.
5. طالب طب ، كلية الطب ، الجامعة الأردنية.
6. طالب طب ، كلية الطب ، الجامعة الأردنية.
7. قسم الأشعة ، كلية الطب ، الجامعة الأردنية.
8. .قسم الجراحة الخاصة ، كلية الطب ، الجامعة الأردنية.

ملخص

الخلفية: الحمل فترة فسيولوجية مرهقة. قد تعاني بعض النساء مندرجة معينة من القلق. . هدفنا دراسة انتشارالقلق بين النساء الحوام اللواتي يبترددن على عيادات الرعاية السابقة للولادة.

المنهجية: كانت هذه دراسة مقطعية للحوامل القادمات للرعاية الروتينية السابقة للولادة في مستشفى الجامعة الأردنية ، خلال الفترة من **1** إلى **27** أكتوبر **2019** ،حيث تمت مقابلتهن أثناء انتظار دورهن من قبل طلاب متدربين من طب سنة **6** باستخدام استبيان اضطراب القلق العام **7.**

النتائج: تمت مقابلة ما مجموعه **200** امرأة بمتوسط عمر **30** ± **5.3** سنوات، تتراوح بين (**18** و **45** سنة). كان متوسط عدد الأحمال **3.3** ± **2.9** (تتراوح من **0** إلى **22**) وكان متوسط عدد الولادات **1.6** ± **1.4**. كان هناك **59** امرأة (**29.5**٪) لديهن تاريخ سابق للإجهاض. عدد حالات الإجهاض تراوحت من **1** إلى **12** بمتوسط **2.5** ± **3.3**. في دراستنا كان لدى **66** (**33.0**٪) من النساء أعراض معتدلة و **42** (**21.0**٪) كانت لديهن أعراض شديدة القلق، بالنسبة للنساء اللواتي لديهن تاريخ إجهاضات سابقة، لم يكن هناك ارتباط كبيرمع القلق، باستثناء النساء اللواتي عانين من حالات الإجهاض المتكررة **.** قيمة **(p=0.019).**

الاستنتاجات: يمكن أن يؤثرالإجهاض على الصحة النفسية للمرأة؛ قد يزيد هذا أيضًا من احتمال التعرض للقلق من حالات الحمل اللاحقة. تنفيذ تقييم الصحة النفسية في رعاية ما قبل الولادة له فوائد طويلة الأمد لكل من الأم والرضيع.

الكلمات الدالة: الإجهاض، القلق، الاكتئاب.

تاريخ استلام البحث 2020/12/12 وتاريخ قبوله للنشر 2021/7/11.