

# Anxiety and Depression among Women after Miscarriage at Jordan University Hospital

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## Abstract

**Background:** Miscarriage is associated with moderate to high risk of psychological problems. In Arab countries the percentage of people who seek psychological help is low. The epidemiological mental studies for clinical and community samples are not frequently conducted in Jordan. The purpose is to study the rate of anxiety and depression after miscarriage since we lack these data in Jordan

**Methodology:** A cross-sectional study for women with early pregnancy loss up to 13 weeks of gestation. A total of 200 women were recruited between June 2018 and November 2019. Assessment for the severity of anxiety and depression was carried out within 12 hours using translated and validated versions of the Generalized Anxiety Disorder-7 and the Patients Health Questionnaire 9.

**Results:** A total of 200 women were included in the study. Their mean age was  $33.1 \pm 6.3$  years and ranges between 19-47 years. Miscarriage ranges from 1-12 weeks of conception with a mean of  $1.9 \pm 1.5$ . Our results for anxiety immediately post evacuation showed that 19.5% had severe anxiety and 22.5% had moderately to severe depressive symptoms. Two subgroups were compared: the first group was 92 women with  $\geq 2$  miscarriages (21.7% had severe anxiety and 20.7% had moderate to severe depressive symptoms), the second group was 27 women with no previous childbirth (18.5% had severe anxiety and 22.2% had moderate to severe depressive symptoms).

**Conclusions:** Fetal loss is a risk factor for mental illness. Appropriate medical and psychological counseling is recommended to reduce anxiety and depression after miscarriage. Increasing medical staff awareness is important to respond to this problem.

**Keywords:** Miscarriage, Anxiety, Depression.

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## **Introduction**

While pregnancy and birth are regarded as a joyful time, early pregnancy loss (EPL) is usually a shocking and traumatic event for women and their families (1). At the time of miscarriage, most women will experience a period of intense emotional distress (2), that leads to symptoms of grief such as sadness, yearning, social isolation and guilt (3). EPL is a risk factor for mental illness (4) and is a significant source of psychiatric morbidity (1). Its impact on a woman's life can erroneously be underestimated (4). Untreated anxiety after EPL is associated with an increased risk of developing depression (5). During the initial weeks following a loss, symptoms of grief may be impossible to distinguish from depression, and some women may continue to experience depressive symptoms for months (2). Such women believe in self-personal responsibility in relation to miscarriage (6). This feeling together with self-blaming have significant relation to high level of anxiety and depression and post-damaging disorder syndrome after miscarriage (6). Also a prior pregnancy loss is a risk factor for developing depression and anxiety during future pregnancies (7). Some women are inadequately screened for depression or anxiety following EPL, leaving them unidentified and untreated which will increase the risk of psychiatric sequelae (1).

The percentage of Arab people who seek psychological help is much lower than those in Western countries (8). Hence; most studies on the psychological impact of miscarriage have been carried out in Western countries (9). Epidemiological mental studies for both clinical and community samples are not frequently conducted in Jordan (10). However, those had shown stigma toward mental illness (10-12) because Arab cultural traditions, values

and beliefs towards mental illnesses are different from those of Westerners (13). So, we design this study to look into the rate of anxiety and depression in women at Jordan University Hospital after EPL, since this subject has not been investigated before in Jordan.

## **Material and Methods:**

All women admitted to Jordan University Hospital for elective termination of previously diagnosed missed miscarriage or retained products of pregnancy on the basis of ultrasound scan, had a structured clinical interview by obstetrics' residents within 12 hours after the evacuation and before discharge. An informed consent was obtained from all participants; they were informed that their participation is voluntary, and that they are free to withdraw anytime during the interview. Women who declined to participate in the study, women who were discharged before the residents were able to interview them and those with miscarriages where fetal measurements were more than 13 weeks by crown rump length were excluded from the study (they were 604 women). Hospital records were reviewed to confirm the histopathology of the outcome. A structured clinical interview was conducted by an obstetrical resident using the translated and validated version of Generalized Anxiety Disorder -7 (GAD 7) to evaluate anxiety state, and the Patient Health questionnaire (PHQ 9) for depression. Respondents were asked to provide information for their age and obstetrical history. They were asked to rate the frequency of anxiety symptoms after evacuation, on a Likert scale which ranges from 0-3. Each item is scored from 0 -3. The 0 is (not at all sure), 1 for (several days), 2 (more than half the days), 3 (nearly every day). The total scores range from 0 (no anxiety symptoms) to 21 (all symptoms occurring daily). A total score of 0-4

represents minimal or no symptoms of anxiety, 5-9 mild, 10-14 moderate and 15-21 severe.

For depression symptoms using PHQ-9 questionnaire; there are 9 items for assessment. Each item is scored from 0 (not at all), to 3 (nearly every day). A total score from 0-4 represents the absence or minimal level of depression, 5-9 mild, 10-14 moderate, 15-19 moderately severe and 20 - 27 for severe depressive symptoms. Both questionnaires were completed during the interview with these women.

The study was approved by the Ethics Committee for Medical Research at the Jordan University Hospital and the University of Jordan. Data were analyzed using SPSS 23. We obtained the frequency and percentage of women suffering from mild, moderate and severe anxiety and depression.

**Results:** A total of 200 women were interviewed with; their characteristics were as follows: their mean age was  $33.1 \pm 6.3$  years and ranges from (19–47) years. Miscarriage ranges from (1-12) weeks with a mean of  $1.9 \pm 1.5$ ; their parity ranges from (0-7) with a mean of  $2.3 \pm 1.5$ . Table 1

Our results for anxiety immediately post evacuation showed that: there was 62 (31.0%) women with minimal or no symptoms, (32.5%) with mild symptoms, 34 (17.0%) with moderate symptoms and 39 (19.5%) with severe symptoms. Table 2

Women with  $\geq 2$  miscarriages showed the following levels of anxiety: 28 (30.4%) no or minimal anxiety, 31 (33.7%) mild anxiety, 13 (14.1%) moderate anxiety, and 20 (21.7%) severe anxiety. Table 2

While women with no previous childbirth has shown that showed 7 (25.9 %) with minimal or no anxiety, 10 (37 %) with mild anxiety, 5 (18.5%) with moderate anxiety, and 5 (18.5%)

with severe anxiety. Table 2

According to the PHQ-9 questionnaire for depression: for the total group, there was 62 (31.0%) with minimal or no symptoms, 58 (29.0%) with mild symptoms, 35 (17.5%) with moderate symptoms and 26 (13.0%) with moderately severe and 19 (9.5%) with severe symptoms. Table 3

Regarding those women who had 2 or more miscarriage, 22 of them (23.9%) had minimal or no depressive symptoms, 33 (35.9%) had mild symptoms, 18 (19.6%) had moderate symptoms and 10 (10.9%) had moderately severe and 9.0 (9.8%) had severe symptoms. Table 3

For women with no previous childbirth, four (14.8%) had minimal or no depressive symptoms, 10 (37.0%) had mild symptoms, 7 (25.9%) had moderate symptoms and 6 (22.2%) moderately severe symptoms, and no women had severe symptoms. Table 3

### Discussion:

The psychological impact of miscarriage is sometimes overlooked because miscarriage is so common, and its management is medically straight forward (14). Expression of grief and depression may show cultural variations (9). Some will develop clinically significant anxiety or depression (1). Miscarrying women are at increased risk for anxiety symptoms immediately following miscarriage and continuing until approximately 4 months post-loss (15).

In a prospective cohort study in 2016 that evaluated the immediate psychological impact of miscarriage, a significant proportion of women met the criteria for anxiety (28–41%) and depression (27%) (16). In our study, 73 (36.5%) women met the criteria for moderate to severe anxiety, and 80 (53%) of them had

moderate to severe depressive symptoms. This was also noticed in another cross-sectional study for depression in which the prevalence of positive depression screen was 34.1% (17).

Several factors have been identified that can predict which women may experience greater emotional distress, such as prior miscarriages, and those with no living children (2). Anxiety was also higher in women with a history of unsuccessful pregnancy (18). In our study, 10 (37%) of women with no previous children have moderate to severe anxiety symptoms and 13 (48.1) % had moderate to severe depressive symptoms.

For women with recurrent miscarriage, we found that 33 (35.8%) of them had moderate to severe anxiety, and 37 (40.3%) had moderate to severe depression, however in other studies those women reported extensive functional disability, and lower level of well-being compared to women without recurrent miscarriage (15). It is shown in our study as in other qualitative studies, that miscarriage can affect the women's quality of life (19).

Avoiding seeking help and disclosing psychological or emotional problems may become more evident in Arab societies who generally have negative attitudes toward mental disorders (20-22), which is worrisome.

We noticed that there are no specific differences between women with no previous miscarriages and those with two or more miscarriages, neither in anxiety or depression.

Mental health care is not integrated within the primary health care system in Jordan (11). Miscarriage will affect the women's quality of life (19). We commend screening these women for anxiety and depression (1) and initiating counseling within one week of miscarriage (2) as part of routine care especially when symptoms and signs are present. At this time opportunities for catharsis, understanding, and legitimating are likely to be helpful, as well as reassurance that this stress is likely to appreciably lessen over the next 6 months (23).

There is a paucity of studies conducted in Jordan on mental illness stigma and professional psychological help-seeking. (24) We hope this study will attract the attention of different medical fields dealing with these women.

Fetal loss is a risk factor for mental illness. Appropriate medical and psychological counseling is recommended to reduce anxiety and depression in these women. Increasing medical staff awareness is needed to respond to the suffering of these women.

**Table 1: Maternal Characteristics of women.**

<b>Maternal characteristics</b>	<b>Women with miscarriage n= 200</b>	<b>Women with 2 or more miscarriages n= 92</b>	<b>Women with no previous childbirth n= 27</b>
Age years (mean)	33.1 ± 6.3	34.2 ± 6.4	29.0 ± 97
Age ranges (years)	19-47	19-45	19-47
Parity (mean)	2.3 ± 1.5	2.8 ± 1.5	0
Parity range	0-7	0-7	0
Miscarriage (mean)	2.3 ± 1.5	3.0 ± 1.5	1.6 ± 1.0
Miscarriage ranges	1-12	2-12	1-4

**Table 2: The anxiety level based on (GAD 7) among women after miscarriage.**

Anxiety	Women with miscarriage n=200		Women with more than Two miscarriage n =92		Women with no previous children n= 27	
	No.	%	No.	%	No.	%
Minimal or no anxiety	62	31.0	28	30.4	7	25.9
Mild	65	32.5	31	33.7	10	37
Moderate	34	17.0	13	14.1	5	18.5
Severe	39	19.5	20	21.7	5	18.5

**Table 3: Depression level based on (PHQ-9) among women after miscarriage.**

Depression	Women with miscarriage n=200		Women with more than Two miscarriage n =92		Women with no previous children n= 27	
	No.	%	No.	%	%	No.
Minimal or no depression	62	31.0	22	23.9	4	14.8
Mild	58	29.0	33	35.9	10	37.0
Moderate	35	17.5	18	19.6	7	25.9
Moderately - Severe	26	13.0	10	10.9	6	22.2
Severe	19	9.5	9	9.8	0	0

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## القلق والاكتئاب بين النساء بعد الإجهاض في مستشفى الجامعة الأردنية

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### الملخص

يرتبط الإجهاض بخطر متوسط إلى مرتفع من المشاكل النفسية. في الدول العربية ، نسبة الأشخاص الذين يطلبون المساعدة النفسية منخفضة. لا يتم إجراء الدراسات النفسية الوبائية للعينات السريرية والمجتمعية بشكل متكرر في الأردن. الغرض هو دراسة معدل القلق والاكتئاب بعد الإجهاض ، حيث نفتقر إلى هذه البيانات في الأردن.

**المنهجية:** دراسة مقطعية مستعرضة للنساء مع فقدان الحمل المبكر حتى 13 أسبوعًا من الحمل. تم دراسة 200 امرأة بين يونيو 2018 ونوفمبر 2019. تم إجراء تقييم لشدة القلق والاكتئاب في غضون 12 ساعة باستخدام إصدارات مترجمة وموثقة من اضطراب القلق العام 7- واستبيان صحة المرضى 9.

**النتائج:** تم تضمين ما مجموعه 200 امرأة في الدراسة. كان متوسط أعمارهم  $33,1 \pm 6,3$  سنة وتراوح ما بين 19-47 سنة. يتراوح الإجهاض من 1-12 أسبوعًا من الحمل بمتوسط  $1,9 \pm 1,5$ . أظهرت نتائجنا للقلق على الفوري بعد عملية التحريقات، أن 19,5٪ كان لديهم قلق شديد و 22,5٪ لديهم أعراض اكتئاب معتدلة إلى شديدة. تمت مقارنة مجموعتين فرعيتين: المجموعة الأولى كانت 92 امرأة مع عدد إجهاضات  $\leq 2$  (21,7٪ يعانون من القلق الشديد و 20,7٪ يعانون من أعراض الاكتئاب المتوسطة إلى الشديدة) ، كانت المجموعة الثانية 27 امرأة بدون ولادات سابقة (18,5٪ كان لديهم قلق شديد و 22,2٪ كانوا يعانون من أعراض اكتئاب متوسطة إلى شديدة).

**الاستنتاجات:** فقدان الجنين هو عامل خطر للأمراض العقلية. يوصى بالاستشارة الطبية والنفسية المناسبة للحد من القلق والاكتئاب بعد الإجهاض. إن زيادة وعي الطاقم الطبي مهم للاستجابة لهذه المشكلة.

**الكلمات الدالة:** الإجهاض ، القلق ، الاكتئاب.