International Journal of Medical Science and Clinical Research Studies

ISSN(print): 2767-8326, ISSN(online): 2767-8342

Volume 05 Issue 01 January 2025

Page No: 164-169

DOI: https://doi.org/10.47191/ijmscrs/v5-i01-28, Impact Factor: 7.949

Psychological Impact on the Patient With a History of Pregnancy Loss

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ABSTRACT

Pregnancy loss is a traumatic event that deeply affects the mental health of women, predisposing them to the development of disorders such as perinatal grief, anxiety, post-traumatic stress and depression. This study aimed to evaluate the psychological impact on obstetric women with a history of pregnancy loss. An observational and prospective study was conducted at the UMAE Hospital de Gíneco-Obstetricia CMNO. Of the patients initially included, 51 completed the evaluation at the first and third month after the loss. Instruments such as the Perinatal Grief Scale, the Checklist for Post-Traumatic Stress Disorder and the Hamilton scales for depression and anxiety were applied. The results at the first month showed a high prevalence of active (98%) and complicated (94.1%) grief, along with anxiety (84.4%), post-traumatic stress (31.4%) and moderate depression (62.8%, according to the Hamilton scale). At three months, active grief persisted in 88.2% of patients, while depression remained in 60.8%, mostly at moderate levels. Anxiety was the most frequent disorder, presenting in 84.4% of patients with active grief. These findings highlight the need for an early and multidisciplinary psychological approach, especially for those women with active or complicated grief, given its strong association with other mental disorders.

KEYWORDS: Perinatal grief, anxiety, depression, post-traumatic stress, pregnancy loss, mental health.

ARTICLE DETAILS

Published On:
29 January 2025

Available on:
https://ijmscr.org/

INTRODUCTION

Pregnancy loss is one of the most traumatic experiences for women of reproductive age, with a significant impact on their mental health. This event, which includes everything from early abortions to stillbirths, affects between 10% and 21% of women worldwide and can lead to disorders such as perinatal grief, anxiety, post-traumatic stress, and depression. The persistence of these disorders over time highlights the importance of establishing effective detection, intervention and follow-up strategies. Although international and local regulations recognize the need for psychological support in women experiencing these losses, there is a lack of specific guidelines on when and how to provide this support. The present study seeks to provide evidence on the psychological impact on women with a history of pregnancy loss, focusing on those who completed assessments at the first and third month after the event.

MATERIAL AND METHODS

Study design: Observational, longitudinal and prospective.

Study population: Women hospitalized at the UMAE Hospital de Gíneco-Obstetricia CMNO with a diagnosis of recent pregnancy loss were included. Of the recruited patients, 51 completed the evaluations at the first and third month. Evaluation instruments: 1. Perinatal Grief Scale: Determines the presence of active and complicated grief. 2. Post-Traumatic Stress Disorder Checklist (PCL): Evaluates the presence and severity of PTSD. 3. Hamilton scales for anxiety and depression: Measure the intensity of these disorders.

Sample calculation: For the calculation of sample size, the article "Depression and post-traumatic stress in women with induced and involuntary pregnancy losses" by Cardoso Escamilla et al. was used as a basis, where a prevalence of 61.2% of post-traumatic stress disorder is reported (the calculation was made for one of the possible diagnoses, the largest sample being PTSD), for which the following formula was used:

Considering the following elements: p = Proportion of those exposed with the event of interest of 61.2% q = 1 - p = Level of confidence or security of 2% two-tailed = 1.96 δ =

Percentage of precision of the test 4% n = Minimum sample size Where: N= (p) (q) / δ N= 2.69 2 (61.2) (38.8) / (4)2 N= (7.23) (2374.56) /16 N= (6386.62)/16 N= 399 Plus 10% of possible losses, 438 participants will be included

Selection criteria Inclusion criteria:

● Patients treated at the UMAE HGO CMNO of any age and gestational weeks who at the time of inclusion in the study are experiencing gestational loss (abortion or death).

● Women who, after receiving the information about the study and its scope, decide to participate by signing an informed consent.

● Literate postpartum women who have the possibility of answering the self-administered survey

Non-inclusion criteria: ●

Postpartum women whose pregnancy was secondary to a fertility treatment.

Women with maternal complications that imply the impossibility of another pregnancy, that is, loss of fertility or compromised fertility (hysterectomy, bilateral salpingectomy).

● Patients with a previous psychiatric diagnosis such as: Depression, bipolar disorder, schizophrenia, suicidal ideation, etc.

● Women who due to their condition cannot participate in the study such as those with neurological disorders or alterations in psychomotor development. ● Patients with perinatal loss where the newborn cried and breathed at birth.

Elimination criteria

● Participants who decide to abandon the study and/or it is not possible to apply the scales in the first and third month after the gestational loss.

● Surveys that are answered partially or in an illegible manner.

● Desire on the part of the patient to withdraw from the study at any time (initial interview, first or second evaluation by psychiatry).

Development of the study and procedures Following authorization from the Health Research Committee, with institutional registration R-2022-1310-058 number R-2022-1310-058 . an observational, longitudinal, descriptive and prospective study was carried out, which included 51 patients who suffered a pregnancy loss to evaluate the psychological impact on patients with a history of pregnancy loss. To identify potential participants, the census of those admitted to the hospital area with a diagnosis of abortion or death was reviewed, in whom it was verified that they met the inclusion criteria and also agreed to participate in the study by signing the informed consent after an explanation of its scope and benefits. The initial interview was conducted in a private and comfortable environment, where general information was questioned, including: age, height, weight, marital status, academic degree, number of pregnancies, previous losses (abortions and deaths), weeks of gestation, preconception care, prenatal monitoring, preexisting comorbidities, gestational comorbidities, complications related to the abortion, identifying whether cervical ripening was used for expulsion and/or the performance of any evacuation procedure, among others.

Once the first part was completed, a follow-up appointment was scheduled at four weeks in the psychiatry outpatient clinic, during which the participant was provided with a specific date and time for the evaluation by the psychiatrist. In the first consultation, the intention to continue in the study was verbally confirmed, after which the co-investigator administered the following self-assessment scales:

The first scale, the Perinatal Grief Scale, consisted of 36 questions with Likert-type responses: 1. Strongly disagree; 2. Disagree; 3. Neutral; 4. Agree; and 5. Strongly agree. It was completed in approximately 8 minutes. Based on the scores, active grief, difficulty coping, and hopelessness were identified. A score >7 on items 1-4 indicated active grief. A score >41 on items 5-16 indicated possible complicated grief.

The second scale, the Hamilton Anxiety Scale, consisted of 14 questions and took an average of 3 minutes to complete. Each question was scored from 0 to 4: 0=None; 1=Mild; 2=Moderate; 3=Severe; 4=Very incapacitating. The total score was interpreted as follows: 0-5 = no anxiety; 6-14 = mild anxiety; >15 = moderate anxiety.

The third scale, the PCL-5 (PTSD Checklist), consisted of 20 questions and took an average of 4 minutes to complete. This scale included 4 different scores based on symptom severity: 0=None; 1=A little; 2=Moderately; 3=Quite a bit; 4=Extremely. A score ≥31 was considered positive for PTSD.

The fourth scale, the Hamilton Depression Scale, was a hetero-administered tool consisting of 17 questions, completed in approximately 4 minutes. It was interpreted as follows: 0-6 = no depression; 7-13 = minor depression; 14-18 = moderate depression; 19-22 = severe depression; >23 = very severe depression.

Finally, the fifth scale, the PHQ-9 for depression, consisted of 9 questions administered by the evaluator in approximately 2 minutes. Four possible responses assessed symptom recurrence, detecting major depression if at least 5 items were marked “more than half the days” and at least one of the positive items corresponded to items 1 or 2. Minor depression was detected if 2 to 4 items were marked “more than half the days” and at least one positive item corresponded to item 1 or 2.

After obtaining the results from the five scales, they were reviewed, verified, and evaluated by the psychiatrist (a co-investigator in this study): 1) Questions about each scale and/or its items were addressed, 2) completeness of responses was ensured, 3) missing items were completed through direct questioning if necessary, and 4) scores were summed, and diagnoses were integrated based on the results of each scale. If any alterations were detected in one or more instruments, medical care and pharmacological treatment were provided when necessary. Regardless of the results, participants were

scheduled for a follow-up appointment at 8 weeks (corresponding to three months post-gestational loss).

In the second evaluation, the five scales were administered again (Perinatal Grief Scale, Hamilton Anxiety Scale, PCL-5, Hamilton Depression Scale, and PHQ-9). These were again reviewed, verified, and evaluated by the psychiatrist. Based on the obtained scores, appropriate medical care was provided if any alterations were detected.

After completing the first part (general data, obstetric history, gestational diseases, history related to gestational loss, and pre-existing conditions), the data were recorded in an Excel database. The database included the scores from the surveys conducted at one month (4 weeks) and three months (12 weeks) as well as the diagnoses based on the interpretation of each instrument. Finally, once all data were collected and the database validated, statistical analysis was performed based on each variable, with categorical variables analyzed using frequencies and percentages, and numerical variables analyzed using means and SD or medians and ranges as appropriate.

Statistical Analysis: Data were processed using SPSS for iOS. Descriptive statistics (frequencies, percentages, means, and standard deviations) and significance tests were applied as appropriate.

RESULTS

Table 1. General Characteristics of the Study Sample (n=112)

Variable	Mean	SD	Median	Min-Max
Age	31.9	6.2	32	18-47
BMI	27.6	5.1	26	18.20-43.20

Marital Status	Frequency	Percentage
Married	54	48.2%
Free Union	33	29.5%
Single	25	22.3%

Education Level	Frequency	Percentage
Primary	3	2.7%
Secondary	30	26.8%
High School	39	34.8%
University	40	35.7%

BMI Classification	Frequency	Percentage
Normal	45	40.2%
Overweight	30	26.8%
Obesity I	24	21.4%
Obesity II	7	6.3%
Obesity III	6	5.4%

Sample Characteristics: The average age of the 51 patients was 31.9 (±6.2) years. The majority were married (48.2%) and had medium to higher education levels (70.5%). A total of 59.8% were overweight or obese. (Table 1)

First-Month Results:

- Active grief: 98%.
- Complicated grief: 94.1%.
- Anxiety (mild to moderate): 84.4%.
- Post-traumatic stress disorder (PTSD): 31.4%.
- Moderate depression (Hamilton Scale): 62.8%.
- 70.6% of patients with complicated grief also exhibited anxiety.
- Patients with moderate depression had a PTSD prevalence of 44.8%.

Three-Month Results:

- Active grief: 88.2%.
- Mild anxiety: 47.1%.
- Persistent depression (moderate): 60.8%.
- 50% of patients with persistent anxiety also presented moderate depression.
- Active and complicated grief showed a significant decrease, remaining high at 88.2% (n=45) for both. Mild anxiety was observed in 47.1% (n=24). Depression remained the most prevalent condition according to the Hamilton Scale (62.8%, n=32) and PHQ-9 Scale (60.8%, n=31). (Table 2)

Table 2. Results of Psychological Disorder Screening After Gestational Loss

Evaluation Instrument	First Month (n=112)		Third Month (n=51)	
	Frequency	%	Frequency	%
Active grief	110	98.2	45	88.2
Complicated grief	108	96.4	45	88.2
PTSD	45	40.2	16	31.4
Anxiety				
Mild	44	39.3	24	47.1
Moderate	54	48.2	19	37.3
Depression (Hamilton)				
Minor	28	25	11	21.6
Moderate	16	14.3	16	31.4
Severe	12	10.7	5	9.8
Very Severe	14	12.5	0	0
Depression (PHQ-9)				
Mild	34	30.4	18	35.3
Moderate	19	17.0	9	17.6
Moderately Severe	12	10.7	3	5.9
Severe	5	4.5	2	1

Active grief was present in 98% of patients (n=50) in the first month following the loss, decreasing slightly to 88% (n=45) by the third month. Patients with active grief in the first month developed complicated grief in 88% (n=45) of cases during the second evaluation. (Table 3)

Table 3. Prevalence of Active and Complicated Perinatal Grief at One and Three Months (n=51)

Evaluation Instrument	First Month (n=112)		Third Month (n=51)	
	Frequency	%	Frequency	%
Active grief	50	98.0	45	88.0
Complicated grief	48	94.11	45	88.2

Among patients with active grief in the first month, 84.4% (n=43) exhibited anxiety, predominantly mild anxiety. PTSD coexisted in 31.4% (n=16). Depression (Hamilton Scale) showed a 62.8% (n=32) prevalence among patients with active grief, predominantly moderate depression. Similarly, PHQ-9 identified a 58.8% (n=30) overlap.

Patients with complicated grief at one month (n=48) persisted in 88.2% (n=45) of cases at three months. During this period, perinatal mental disorders coexisted, including anxiety (84.4%, n=43, predominantly mild), PTSD (31.4%, n=16), and moderate depression (Hamilton Scale: 62.8%, n=32; PHQ-9: 60.8%, n=31). Anxiety remained the most common perinatal mental disorder associated with complicated grief.

Regarding anxiety (n=45) in the first month, it was found that at three months, 84.4% (n=38) of cases persisted, mostly with mild anxiety. The perinatal mental disorder most associated with anxiety was depression. According to the Hamilton Scale, 62.8% (n=32) of those with anxiety also had moderate depression, and based on the PHQ-9 Scale, 60.8% (n=31) were classified mostly as mild depression.

Among patients who presented with PTSD at one month (n=19), 52.6% (n=10) continued to exhibit PTSD at three months. Of these, 89.4% (n=17) had coexisting anxiety, while depression, as per the Hamilton Scale, coexisted in 84.2% (n=16), and 79.1% (n=15) according to the PHQ-9. Therefore, anxiety was the most associated perinatal mental disorder with PTSD.

Patients who presented with depression based on the Hamilton Scale at one month (n=29) showed persistence in 75.8% (n=22) at three months. These cases were associated with active perinatal grief in 86.2% (n=25) and complicated grief in 89.6% (n=26). Coexistence with anxiety was observed in 82.7% (n=24), PTSD in 37.9% (n=11), and depression as per the PHQ-9 in 68.9% (n=20), mostly classified as mild. The most prevalent disorder among patients with depression at one month (Hamilton Scale) was complicated grief.

For patients with depression at one month based on the PHQ-9 Scale (n=31), 70.9% (n=22) continued to show depression at three months according to the same scale. Coexistence with anxiety was observed in 83.8% (n=26), and PTSD in 35.4% (n=11). Based on the Hamilton Scale, 74.1% (n=23) were also classified as having moderate depression. Anxiety was the most prevalent disorder among patients with depression at one month (PHQ-9).

It is important to note that depression was one of the most significant disorders evaluated due to its high prevalence and persistence. Notably, patients who presented with depression at three months, regardless of severity, had a perinatal mental disorder from the first month. All patients (100%, n=31) who presented with depression during the second evaluation had active grief at one month, and 93.5% (n=29) had complicated grief. Following active perinatal grief, anxiety was the most common predisposing factor for depression, present in 100% (n=31) of patients, most frequently as moderate anxiety. PTSD, with a prevalence of 48.3% (n=15), was the least prevalent disorder among patients with depression. Nonetheless, the prevalence of all disorders was high, making active grief and anxiety early manifestations of depression.

At three months, the overall frequency of disorders decreased, with grief remaining the most prevalent. PTSD (38.7%, n=12) had the lowest prevalence, similar to the first month. Although anxiety decreased by 16% among participants, it remained highly associated with other conditions. (Table 4)

Table 4. Coexistence of Depression with Psychological Disorders After Gestational Loss (n=31)

Evaluation Instrument	First Month		Third Month	
	Frequency	Percentage	Frequency	Percentage
Active grief	31	100	25	80.6
Complicated grief	29	93.5	26	83.8
PTSD	15	48.3	12	38.7
Anxiety				
Mild	8	25.8	13	41.9
Moderate	23	74.1	13	41.9

Regarding the psychological impact, the evaluation at one month after the loss revealed active grief in 98.2% of patients, with high prevalence rates of anxiety (48.2%), PTSD (40.2%), and depression (62.5%). Although these percentages decreased by the third month, the prevalence remained high, especially for depression (60.8%). Anxiety (83.8%) and perinatal grief (>80%) were identified as the most commonly associated disorders.

DISCUSSION

The findings of this study reflect the significant impact of gestational loss on women's mental health, even several months after the event. The high prevalence of active and complicated grief at the first month, along with the persistence of disorders such as anxiety and depression at three months, underscores the need for early and sustained psychological care.

The coexistence of mental disorders, such as anxiety and depression, with active and complicated grief demonstrates that these conditions are interrelated. Previous studies have documented similar results, highlighting the importance of multidisciplinary interventions that include screening, emotional support, and psychiatric follow-up to mitigate these effects.

A notable finding was the persistence of depression in more than 60% of patients, which highlights the need for effective tools for timely detection and treatment. Additionally, the high prevalence of mild to moderate anxiety suggests that this disorder may be an early precursor to more severe conditions such as depression.

The association between educational level and reduced anxiety levels suggests that sociocultural factors may influence patients' coping abilities when facing gestational loss. These findings support the need to personalize psychological interventions according to the patients' sociodemographic characteristics.

Moreover, the persistence of disorders such as complicated grief and moderate depression in a significant percentage of women highlights the insufficiency of current support strategies, emphasizing the need to develop more effective protocols for clinical follow-up.

Finally, the high rates of anxiety and PTSD in the first month after the loss underscore the importance of implementing early intervention programs, ideally within the first few weeks following the event, to prevent the chronicity of these disorders.

CONCLUSION

The results of this study emphasize the high prevalence and persistence of psychological disorders in women with a history of gestational loss, particularly active grief, anxiety, and depression. These findings underline the need to design and implement early intervention strategies tailored to the sociodemographic and psychological characteristics of the patients to prevent the chronicity of mental disorders and promote a better quality of life.

It is essential to incorporate routine screenings into obstetric care services and strengthen multidisciplinary care by involving mental health specialists to effectively address the emotional needs of these women. Finally, further research is required to deepen our understanding of protective and risk factors associated with psychological recovery after gestational loss.

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