ORIGINAL RESEARCH PAPER
Volume - 14 | Issue - 12 | December - 2025 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

PSYCHOLOGICAL OUTCOMES AFTER MISCARRIAGE OR STILLBIRTH: A PROSPECTIVE STUDY

Psychiatry

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ABSTRACT

Miscarriage and stillbirth are common forms of pregnancy loss, yet their psychological sequelae remain under-recognised. This prospective study followed 90 Indian women (60 miscarriages, 30 stillbirths) recruited within one month of loss and assessed grief, post-traumatic stress disorder (PTSD), anxiety and depression at baseline, three months and six months using the Perinatal Grief Scale, Impact of Event Scale–Revised, Beck Depression Inventory-II and Generalized Anxiety Disorder-7. Baseline assessments revealed high grief in 80 % of women, PTSD in 30 %, and moderate-to-severe anxiety or depression in roughly one third. Symptoms improved over time but remained clinically significant for many: at six months. Women who experienced stillbirth exhibited more severe grief and PTSD than those with miscarriage. Gestational age at loss, prior mental health problems and low social support predicted persistent distress. These findings underscore the need for routine mental-health screening and integrated psychosocial care in obstetric practice.

KEYWORDS

Miscarriage; Stillbirth; Depression; Anxiety; Post-traumatic stress disorder; Perinatal grief

INTRODUCTION

Pregnancy loss, including miscarriage (loss before 20 weeks) and stillbirth (fetal death at 28 weeks or later), is common in India. National surveys estimate that about 7 % of pregnancies end in miscarriage and roughly 0.7–1 % end in stillbirth, yet these events often remain hidden or stigmatised and their psychological sequelae are poorly understood.[1] Meta-analytic evidence suggests that roughly one third of women experience anxiety or depression within six weeks of a miscarriage, and bereaved mothers have markedly higher odds of mental health problems than mothers with live infants.[2] Psychological responses vary with gestational age, cultural norms and social support—later losses involve labour and stronger attachment to the fetus, whereas early losses may be dismissed by others, resulting in disenfranchised grief. In patriarchal societies where reproductive failure may be stigmatised, women often internalise blame or face negative reactions from family members, compounding their distress.

This prospective study followed Indian women after miscarriage or stillbirth to quantify grief, PTSD, anxiety and depression over six months. We hypothesised that symptoms would diminish with time but remain higher after stillbirth, and that later gestational age, prior mental illness and low social support would predict persistent psychological morbidity.

Methods

Study Design And Participants

We conducted a prospective observational study in two district hospitals in Rajasthan, India, from January to September 2025. Ethical approval was obtained from each institutional review board. Women aged 18–45 who had experienced a miscarriage (<20 weeks) or stillbirth (≥28 weeks) within four weeks were eligible. Exclusion criteria were current pregnancy, termination for fetal anomalies, multiple gestation loss or inability to consent.

Eligible women were approached during follow-up visits or contacted by telephone; 90 out of 112 approached women agreed to participate (80 % response rate). Sixty had miscarriages and 30 had stillbirths. Participants completed questionnaires in Hindi or English at baseline (within one month), three months and six months after loss. Baseline data included age, parity, gestational age at loss, history of psychiatric illness and social support (rated on a Likert scale).

Measures

Grief was measured with the 33-item Perinatal Grief Scale (PGS). A translation and validation study in Indian women with perinatal loss found that the PGS has good internal consistency, with Cronbach's alpha coefficients for the subscales (active grief, difficulty coping and despair) exceeding 0.70.[3] PTSD symptoms were assessed using the 22-item Impact of Event Scale–Revised (IES-R).[4] Depressive symptoms were captured with the 21-item Beck Depression Inventory-II (BDI-II).[5] Anxiety was measured with the Generalized Anxiety Disorder-7 (GAD-7) scale.[6]

Analysis

Descriptive statistics summarized demographic variables and scale scores. Differences between miscarriage and stillbirth groups at each time point were examined using t-tests or χ^2 tests. Repeated-measures analysis of variance assessed changes in scores over time. Logistic regression identified predictors of high grief (PGS score > 90th percentile), PTSD (IES-R ≥ 33), moderate-to-severe anxiety (GAD-7 ≥ 10) and depression (BDI-II ≥ 20). Predictors included gestational age, parity, previous psychiatric history and social support.

RESULTS

The sample had a mean age of 27.8 years (SD = 4.5). Approximately 60 % were primiparous, and 20 % reported a history of psychiatric illness. The mean gestational age at loss was 11.5 weeks among miscarriages and 32.1 weeks among stillbirths.

Table 1 presents demographic and obstetric characteristics by group. Women with stillbirth were slightly older and more likely to have had previous pregnancies than those with miscarriage. Social support scores did not differ significantly between groups.

Table 2 summarizes prevalence of psychological morbidity. At baseline, high grief was reported by 75 % of women with miscarriage and 85 % of those with stillbirth. PTSD criteria were met by 20 % and 40 % respectively. Moderate-to-severe anxiety affected 30 % of miscarriage and 45 % of stillbirth participants, while moderate-to-severe depression affected 25 % and 35 %.

Over time, symptoms declined but remained clinically significant. At six months, high grief persisted in 35 % of miscarriages and 50 % of stillbirth participants. PTSD prevalence fell to 10 % for miscarriage and 20 % for stillbirth. Anxiety dropped to 12 % and 18 %, and depression to 8 % and 15 %. Repeated-measures ANOVA showed significant main effects of time for all outcomes ($p < 0.001$) and significant group × time interactions for grief and PTSD ($p < 0.05$), indicating more persistent symptoms after stillbirth.

In multivariable logistic regression, stillbirth (OR = 2.8, 95 % CI 1.8–4.3), gestational age at loss (per week OR = 1.05), previous psychiatric history (OR = 3.2) and low social support (OR = 4.1) predicted persistent high grief at six months. Similar predictors emerged for PTSD and depression, whereas low parity predicted higher anxiety.

Table 1. Demographic And Obstetric Characteristics Of Participants

Characteristic	Miscarriage (n = 60)	Stillbirth (n = 30)	Total (n = 90)	p–value
Mean age (years)	27.3 ± 4.2	28.8 ± 4.7	27.8 ± 4.5	< 0.05
Primiparous (%)	65	50	59	0.03
Mean gestational age at loss (weeks)	11.5 ± 4.0	32.1 ± 3.1	19.7 ± 10.0	< 0.001
History of psychiatric illness (%)	18	24	20	0.20
High social support (%)	55	53	54	0.80

Table 2. Prevalence Of Psychological Morbidities At Baseline, Three And Six Months (Miscarriage/Stillbirth)

Outcome	Baseline (%)	3 months (%)	6 months (%)
High grief	75/85	50/75	35/50
PTSD	20/40	15/35	10/20
Moderate–severe anxiety	30/45	20/30	12/18
Moderate–severe depression	25/35	15/25	8/15

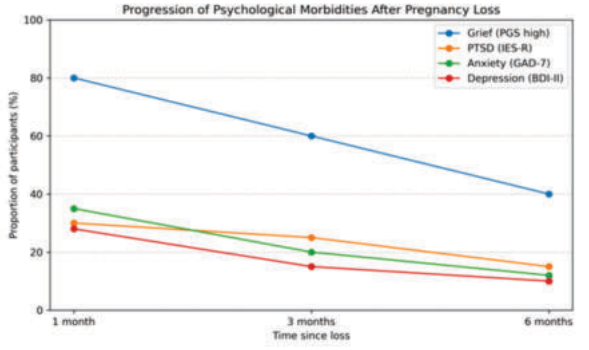

Figure 1. Trajectory of psychological morbidities

Progression of high grief, PTSD, anxiety and depression by loss type.

DISCUSSION

This prospective cohort found that psychological distress following pregnancy loss is highly prevalent and persistent. Most participants experienced intense grief at baseline, and a substantial proportion met criteria for PTSD, anxiety or depression. Although symptoms diminished over time, one third of women continued to report high grief and one tenth met criteria for PTSD at six months, underscoring the protracted nature of bereavement after miscarriage and stillbirth.

Our results align with prior literature. The baseline prevalence of depression and anxiety in our sample approximated global estimates from a systematic review that reported anxiety in 32.5 %, depression in 30.1 % and stress in 33.6 % of women within six weeks of miscarriage (Shetty et al., 2025).[2] They also reflect Indian evidence: a hospital-based study found that about 51.6 % of bereaved mothers reported anxiety and 48.7 % reported depression after a stillbirth.[7] Another study reported that 53.3 % of women had anxiety symptoms 2–6 weeks after stillbirth compared with 29.3 % of mothers with live infants (odds ratio 2.74), while 54 % reported stress (odds ratio 5.89).[8] Data on PTSD prevalence after pregnancy loss in India remain limited, highlighting a need for further research.

The greater severity and persistence of grief and PTSD among stillbirth participants likely reflect the trauma of delivering a dead baby and the deeper attachment formed later in gestation. Gestational age at loss emerged as a predictor of distress, consistent with evidence that attachment intensifies as pregnancy progresses. The strong association between low social support and poor outcomes highlights the role of sociocultural context; women may be blamed for the loss or pressured to conceive again quickly, compounding their grief.

Clinically, these findings advocate for routine mental-health screening in obstetric and postpartum care. Brief, validated instruments such as the PGS, IES-R, BDI-II and GAD-7 have demonstrated strong psychometric properties. Women experiencing stillbirth, those at later gestational ages, those with a history of mental illness or low social support should be offered targeted interventions, including counselling and support groups. Integrating psychosocial services into maternity care could mitigate the hidden psychological burden of pregnancy loss.

This study has limitations. The sample was restricted to one Indian state and may not generalise to other cultural contexts. We relied on self-report measures, which can be influenced by reporting bias. We also did not include a comparison group of women with live births. However, strengths include prospective design, relatively large sample and concurrent assessment of multiple psychological outcomes.

CONCLUSION

Pregnancy loss is a profound life event with enduring psychological sequelae. In this cohort, grief and PTSD were prevalent and persisted for months, especially following stillbirth. Later gestational age, prior mental health issues and low social support predicted persistent distress. These findings underscore the importance of integrating mental-health assessment and culturally sensitive support into routine obstetric care.

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