

# **Postpartum Depression in Women on Public Assistance: Pilot Study of an Interpersonally-Oriented Group Intervention**

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## Abstract

**Objective:** This study investigated whether a preventive intervention based on interpersonal psychotherapy principles administered to pregnant women would reduce the risk of postpartum major depression. **Method:** Thirty-seven pregnant women on public assistance with at least one risk factor for postpartum depression were randomly assigned to a four-session group intervention or to a treatment as usual condition. Structured diagnostic interviews were administered to assess for postpartum major depression. **Results:** Within three months of postpartum, 6 (33%) of the women in the treatment as usual condition had developed a postpartum major depression compared to none in the intervention condition. **Conclusion:** A four-session interpersonally-oriented group intervention was successful in preventing the occurrence of major depression during a postpartum period of three months in a sample of financially disadvantaged women.

About 10-16% of parous women experience a postpartum depression which is associated with more severe depressive symptoms, social dysfunction, and marital maladjustment than depression unrelated to the postpartum period (1). Reducing the risk of postpartum depression in poor women is especially important since poverty is associated with twice the rate of postpartum depression (2) and socioeconomic adversity amplifies the negative effects of postpartum depression on infant development (3). Poverty limits access to resources, such as mental health services, which lessens the deleterious effects of postpartum depression (2).

Postpartum depression is particularly amenable to prevention. There is a clear marker (birth) prior to the onset and a defined period of risk (i.e., the three-month period after childbirth) (4). Also, research has increased the feasibility of identifying high-risk mothers. Furthermore, many risk factors for postpartum depression are amenable to change (5).

In general, preventive interventions, particularly those administered in a group format, appear to decrease postpartum depressive symptoms. Only two published studies, to date, have examined the prophylactic efficacy of an intervention in reducing postpartum depression. One of these studies found that, among a group of high-risk women, of those women who received a group intervention which focused on preparation for parenthood and social support, 8% developed depression by 3 months postpartum compared to 16% in a control group (6). In contrast, the other study showed a negligible percent difference in the occurrence of postpartum depression among high-risk women who were assigned to either a control group or group intervention that provided general support (7). Limitations of prior research are lack of randomization (6), poor compliance rates (6,7), and use of an inadequate measure of postpartum depression (7).

The present study assessed the efficacy of a group intervention in reducing the likelihood of postpartum depression in pregnant women on public assistance with at least one risk factor for postpartum depression. The intervention was based on interpersonal therapy (IPT), an effective form of treatment for depression (8), that targets factors (e.g., poor social support, role transition, life stressors), which may play a crucial role in the onset of postpartum depression (5,9). Moreover, IPT is the only existing treatment with efficacy data for the treatment of prenatal and postpartum depression (10,11).

## Method

Subjects for this study were pregnant women on public assistance who were 20-32 weeks gestation and who were attending a prenatal clinic at a Northeast general hospital. After obtaining informed consent, these women completed a survey which assessed for risk factors for postpartum depression (i.e., a previous episode of depression or postpartum depression, mild to moderate levels of depressive symptoms, poor social support, or a life stressor within the last six months). Participation for this phase of the study was very high (about 90%).

Women who reported on the survey at least one predictor of postpartum depression were approached to participate in the next phase of the study (i.e., random assignment to either the intervention group or “treatment as usual” condition). All subjects understood that whether or not they were assigned to the intervention condition, they would continue to receive standard medical attention and treatment that is provided to all patients attending the prenatal clinic, irrespective of participation or refusal of participation in the research protocol.

Approximately 50% of the women who were eligible, consented to participate in this phase of the study. Patients who met criteria for current major depression as determined by the depression module of the Structured Clinical Interview for DSM-IV, Revised, Non-Patient Version (SCID-R, NP-V) (12), were excluded from the study. The final study group was 37 women. After completion of the preintervention assessments, 8 to 12 women were randomly assigned to one of the conditions.

At preintervention and postintervention, all subjects completed a Beck Depression Inventory (BDI) (13) to assess the degree of depressive symptoms. At 3 months postpartum, all subjects were assessed for postpartum depression for the previous 3 months using the depression module of the SCID-R, NP-V (12).

Briefly, the intervention, “Survival Skills for New Moms,” involved four 60-minute group sessions over a 4-week period. The first session consisted of a rationale for the program and psychoeducation on “baby blues,” and postpartum depression. The second session focused on identifying role transitions, changes associated with role transitions and goals for successfully managing role transitions with an emphasis on transition to motherhood. The third session was concerned with setting goals, developing supports, and identifying potential interpersonal conflicts, especially once the baby is born. The fourth session taught skills for resolving

interpersonal conflicts, and reviewed the main themes of the intervention. Handouts from the material presented in each session were given as well as session-related homework assignments.

The majority of the women (90%) attended at least 3 of the 4 sessions. Only one woman from the intervention and one woman from the “treatment as usual” condition dropped out of the study.

## Results

Of the 35 women who completed the study, nearly half (45%) of the study subjects were Caucasian, 77% were single and 77% had completed high school. The mean age of subjects was 23.4 (SD=4.41; range =18-38). The mean preintervention BDI score was 11.06 (SD=6.84) and the mean number of risk factors for postpartum depression was 2.60 (SD = 1.90). Table 1 shows the number of women in each condition that reported a presence of the various risk factors. There were no significant differences between these two groups on any demographic variables, number of risk factors, number of children, or parity. In addition, there were no significant differences between the two groups on any of the risk factors, that is, presence of a previous episode of depression, the experience of a recent life stressor, poor support person, or level of depressive symptoms.

A t-test found that women in the intervention group (N = 17) showed a significant reduction from their initial BDI score to their postintervention BDI score compared to those who did not receive the intervention (N = 18), ( $t = 3.50$ ,  $df = 33$ ,  $p = .001$ ). Table 2 shows the mean pre- and postintervention scores, the % with reliable improvement (i.e., percent whose level of functioning moved within the range of the functional population from pre- to postintervention) and those who met criteria for major depression within the 3-months postpartum period. To calculate a reliable change index and cutoff score for the BDI, we obtained a reliability estimate and descriptive statistics for the functional distribution of the BDI from published studies (14-15). As recommended by Jacobson and Truax (16), the reliable change index was greater than 1.96. A chi-square showed that women in the intervention group were significantly less likely to develop postpartum depression compared to those in the control group (0% versus 33%), ( $\chi^2 = 4.69$ ,  $df = 1$ ,  $p = .02$ , Fischer's exact test). Three of the women who developed postpartum depression had a previous history of depression. The study found that a history of depression, initial level of depressive symptoms or primiparous status was not significantly related to the presence of postpartum depression.

## Discussion

This preliminary study found that, in a sample of financially disadvantaged women at risk for postpartum depression, a four session antepartum group intervention prevented the occurrence of major depression within a three months postpartum period compared to a control group in which 33% of subjects reported postpartum major depression. It is possible that a longer follow-up period may have resulted in a similar rate of postpartum depression between the two conditions. However, research has demonstrated that the highest risk period for developing depression is during the first three months postpartum and that 76% of women who develop postpartum depression over a six-month period report that their depression began less than five weeks after delivery (17).

The significant efficacy of the group intervention in this study may have differed from the results of previous studies (6,7) due to the higher compliance rate in the current study. Clearly, if the results of this trial are replicated in a larger trial, this low-cost, preventive intervention which curtails the emotional and financial tolls associated with postpartum depression has significant public health implications.

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Table 1. Presence of Risk Factors Prior to Randomization to the Group Intervention or "Treatment as Usual" Control Condition (N = 35)

Risk Factor	Intervention Received (N = 17) N (%)	No Intervention (N = 18) N (%)
Previous history of depression	12 (70)	9 (51)
Poor social support	8 (47)	9 (50)
BDI <sup>a</sup> score above 10	12 (70)	8 (44)
Recent stressful event	15 (88)	14 (77)

<sup>a</sup> BDI = Beck Depression Inventory (Beck et al., 1961).

Table 2. Changes in Depression Symptom Scores and Depression Status after a Group Intervention and at 3-months Postpartum for Women at Risk for Postpartum Depression (N = 35)

Measure	Intervention Received (N = 17)	No Intervention (N = 18)
BDI <sup>a</sup> score		
at preintervention M (SD)	13.0 (6.88)	9.2 (6.46)
BDI score		
at postintervention M (SD)	8.4 (7.75)	11.3 (4.79)
% Reliable change <sup>b</sup>		
at postintervention	38	12
Postpartum depression <sup>c</sup>	0 (0%)	6 (33%)

<sup>a</sup> BDI = Beck Depression Inventory (Beck et al., 1961).

<sup>b</sup> Pre-post test change score necessary for a reliable change index = 1.96 (Jacobson and Truax, 1991) using .86 as the BDI reliability (Beck et al., 1988) and 8.10 as the standard deviation (Nietzel et al., 1987).

<sup>c</sup> Major depression module of the Structured Clinical Interview for DSM-IV, Revised, Non-Patient Version (SCID-R, NP-V; First et al., 1997) for the 3-months postpartum period.

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