

Revision of the Postpartum Depression Predictors Inventory

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Postpartum depression has been described as a thief that steals motherhood. Early recognition is one of the major challenges with this devastating mood disorder. This article describes a revised version of the Postpartum Depression Predictors Inventory (PDPI) based on the results of an updated meta-analysis. This revised inventory consists of 13 risk factors related to postpartum depression. Guide questions for each of the 13 predictors that clinicians can use during an interview process also are included. Included among these 13 predictors in the PDPI-Revised are four new risk factors: self-esteem, marital status, socioeconomic status, and unplanned/unwanted pregnancy. Ideally, this checklist should be completed each trimester to update a pregnant woman's risk status. After a woman gives birth, the PDPI-Revised should be used to continue to monitor her risk status because she can develop postpartum depression at any time during the 1st year after childbirth. *JOGNN*, 31, 394-402; 2002.

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Mothers suffering from postpartum depression have disclosed that they feel like “death warmed up” and are “afraid to be alive” (Dalton, 1996). Postpartum depression has been described as a thief that steals motherhood (Beck, 1999). The average prevalence rate of this crippling postpartum mood disorder, assessed using a validated or standardized measure, is 13% (O'Hara & Swain, 1996). A striking characteristic of postpartum depression is how covertly it is suffered (Spinelli, 1998). Ramsay (1993) reported that up to 50% of the cases of postpartum depression go undetected. Early recognition

is one of the major challenges in dealing with this mood disorder (Bagedahl-Strindlund & Borjesson, 1998). MacLennan, Wilson, and Taylor (1996) reported that only 49% of mothers who felt seriously depressed sought help.

Further underscoring the need to screen women for their risk of developing postpartum depression is the growing evidence that this mood disorder has devastating effects not only on mothers themselves but also on their entire families. Postpartum depression can take a costly toll on infants and older children whose mothers are battling this mood disorder (Beck, 1995, 1998b).

The short-term adverse effects of postpartum depression on maternal-infant interaction have been repeatedly reported. A metasynthesis of 19 studies indicated that postpartum depression had a moderate to large adverse effect on maternal-infant interaction during the 1st year after delivery (Beck, 1995). Compared with mothers who were not depressed, depressed mothers displayed less affectionate behavior, were less responsive to their infants, and were withdrawn with flatness of affect. Infants whose mothers were depressed tended to be fussier and make fewer positive facial expressions and vocalizations than infants of mothers who were not depressed.

Evidence is accruing about the long-term sequelae for children of mothers who experienced postpartum depression. A meta-analysis of nine studies was conducted to determine the magnitude of the effect of this mood disorder on the cognitive and emotional development of children over the age of 1 year (Beck, 1998b). Findings indicated that postpartum depression had a small but significant adverse effect on children's cognitive and emotional development.

The first, critical step in minimizing the ravages of postpartum depression on mothers and their families is the identification of women who are at high risk for developing it. This article describes an updated version of an inventory that assesses a woman's risk for developing postpartum depression. Once women are identified, early interventions can help mothers with this crippling mood disorder (MacLennan et al., 1996).

A striking characteristic of postpartum depression is how covertly it is suffered.

The Postpartum Depression Predictors Inventory (PDPI) (Beck, 1998a) was developed from the findings of two meta-analyses on postpartum depression risk factors (Beck, 1996a, 1996b). A meta-analysis is a quantitative review of the literature (Glass, 1976). It allows for the systematic synthesis and integration of findings from multiple individual studies that investigate a similar research question. Statistical techniques are used in a meta-analysis to change individual research results into a common metric, called an effect size. In Beck's two meta-analyses, the effect size was a measure of the magnitude of the relationship between a particular risk factor and postpartum depression.

The PDPI is an inventory in the form of a checklist that consists of the eight risk factors found in the meta-analyses to be significantly related to postpartum depression. These eight predictors are prenatal depression, prenatal anxiety, history of previous depression, social support, marital satisfaction, life stress, child care stress, and maternity blues. The PDPI can be used during both prenatal and postpartum periods to identify women who are at high risk for postpartum depression. The PDPI has been used at clinical sites throughout the United States, as well as in Canada and Iceland. The PDPI was translated into Icelandic for a study of how Icelandic women expressed their feelings during the last trimester of pregnancy (Stefansdottir, Eiriksdottir, Karlsdottir, & Ingolfsdottir, 2000).

Because the PDPI was based on the findings of meta-analyses, Beck (1998a) stressed that the inventory should be revised periodically to include additional significant risk factors reported in recent research and to delete risk factors that are no longer significant. The changing strengths of predictors can also be determined through periodic updates of the original meta-analyses.

Most of the studies combined in the original meta-analysis (Beck, 1996a, 1996b) of postpartum depression predictors were published in the 1980s. The most recent studies that were included had been published in the early

1990s. The latest meta-analysis (Beck, 2001) updated the list of risk factors. The studies in this updated meta-analysis were published in the 1990s. The most recent study was published in 1999.

The purpose of this article is to describe the PDPI-Revised, which was based on the results of the updated meta-analysis. First is a review of published instruments for screening women for risk of developing postpartum depression. Next, the findings of the updated meta-analysis, upon which the PDPI-Revised is based, are discussed. Finally, a description of the PDPI-Revised follows, along with its comparison with other screening instruments.

Screening Instruments

A review of the literature revealed that in addition to the PDPI, there were six instruments designed to identify women during the prenatal period who are at risk for developing postpartum depression. The earliest instrument was developed by Braverman and Roux (1978). Clinical intuition and current knowledge regarding psychopathology were used to create the items in their instrument. Braverman and Roux tested a preliminary 19-item, yes/no questionnaire with 120 Canadian women and identified the six questions with the best predictive values. This shortened, self-administered questionnaire had a sensitivity of 94% and a specificity of 85% for identifying a woman at high risk for postpartum depression. The six questions assess the following risk factors: marital status, history of postpartum depression, unplanned/unwanted pregnancy, marital problems, and feeling unloved by partner.

In 1984, Petrick created a self-administered checklist of 16 risk factors gleaned from a literature review for the purpose of helping clinicians to identify women in early pregnancy who are at risk for developing postpartum depression. These 16 risk factors included anxiety regarding this pregnancy, support from other pregnant women or women with infants, emotional support of partner/family, unplanned pregnancy, readiness to assume the role of mother, depression history, recent major life changes, difficulty making changes, fear of illness, upset about the bodily changes of pregnancy, relationship with mother, planning to breastfeed, family history of psychiatric illness, and sadness and/or changing emotions at three points in time: premenstrual, while taking birth control pills, and after previous pregnancies. Women are asked to answer yes, no, or not applicable to each of these 16 questions. Petrick suggests that if a woman answers yes to most of the questions, clinicians should be alert to her possible high-risk status for postpartum depression. Petrick has not published data on how predictive her instrument is.

From reviewing the research on predicting postpartum depression, Boyer, Van Der Leden, and Bacom (1990)

compiled a checklist of the following 16 risk factors that can be used in clinical practice: changing emotions around menstrual periods, prenatal anxiety, support from family, support from friends, feeling unloved by partner, regret about this pregnancy, previous postpartum depression, prior mental illness, past emotional problems, lack of control of one's life, nervous/worry a lot, prenatal depression, unhappy childhood, angry at your life situation, feel it's your fault when bad things happen to you, and financial/housing/other personal problems. Boyer and colleagues recommend that women be considered at risk for postpartum depression if they have three to six risk factors and at high risk if they have more than six risk factors. The authors did not give any rationale for their selection of these cutoff scores. All 16 questions on the checklist require a yes or no response.

The Antenatal Screening Questionnaire (Appleby, Greigore, Platz, Prince, & Kumar, 1994) is a 10-item, self-administered instrument constructed from research results of one of the authors (Kumar & Robson, 1984) on psychosocial risk factors for postpartum depression. Its items cover the woman's psychiatric history, prenatal worries, unwanted pregnancy, life stress, and social support. A choice of responses follows each item. For eight Likert-type items, a possible score is 0 to 3, whereas for two items, the choice is no or yes, giving a score of 0 to 1.

Appleby et al. (1994) assessed the predictive validity of the Antenatal Screening Questionnaire (ASQ) with 126 women who, at 36 weeks pregnant, completed this questionnaire. When these women were 8 weeks postpartum, they completed the Edinburgh Postnatal Depression Scale. Even though the ASQ was significantly correlated ($r = .24, p < .01$) at a low level with the postnatal Edinburgh Postnatal Depression Scale, the screening scale did not discriminate well between women who did or did not experience depression after delivery. The ASQ predicted 44% of the women who went on to become depressed in the postpartum period. Women who had experienced prenatal depression or had a prior history of being treated for depression were three times more likely to experience postpartum depressive symptoms. Appleby and colleagues did not report a cutoff score for the number of risk factors or score for the scale.

Another instrument that comes from Australia is the Modified Antenatal Screening Questionnaire (MASQ) (Stamp, Williams, & Crowther, 1996). It is a self-administered, nine-item, Likert-type scale that assesses a woman's current relationship with her partner, her problem-solving style, whether she has a friend or relative available to talk with, and her previous psychiatric history. Scores on each item range from 0 to 2. Also included in the MASQ was the 25-item version of the Crown Crisp Experiential Index, which assessed anxiety (Crown & Crisp, 1979). If a woman achieved a score of 10 on the Crown Crisp Experiential Index, Appleby and colleagues

weighted this a score of 2 and it was sufficient on its own to predict a woman as vulnerable to depression. An overall score of 2 or more on the MASQ was used to predict which women were vulnerable to postpartum depression. Stamp et al. (1996) reported that for a sample of 249 Australian women, the MASQ had a sensitivity of 73% and a specificity of 43% for major depression. For minor depression, its sensitivity was 81% and specificity 48%. The researchers concluded that their screening scale was only able to predict minor depression.

Posner, Unterman, Williams, and Williams (1997) published the Antepartum Questionnaire (APQ), which is a self-administered instrument to identify pregnant women at risk for postpartum depression. It was developed in two phases. In the first study, 125 women in their 2nd trimester completed a 61-item questionnaire based on a review of the literature and Posner and colleagues' previous studies. Women were interviewed bedside after delivery and administered the Beck Depression Inventory at three different postpartum points: when in the hospital, at 4 to 6 weeks postpartum, and at 12 weeks postpartum. Clinical confirmation of the results of the Beck Depression Inventory was established using the Schedule for Affective Disorders and Schizophrenia instrument with a random sample of the women. Based on the data analysis, 23 of the original 61 questionnaire items were kept, plus 1 item from the demographic information. The 24 items composing the APQ focus on the woman's education; socioeconomic status; marital status; relationships with her mother, her father, and her husband/boyfriend; pregnancy and medical history; social support; early family life; self-esteem; history of postpartum depression; anxiety during pregnancy; and sadness during pregnancy. Twenty-two of the 24 items are Likert-type questions with scores ranging from 0 to 6. The total APQ score is calculated by adding the numerical value for each of the 24 items.

In the second study, the then 24-item APQ was administered to a different sample of 125 women in the 2nd trimester of pregnancy. This second sample also completed the Beck Depression Inventory at the same time periods as women in sample 1. Validation of the 24-item APQ was accomplished by applying it retrospectively to data from the first sample and then prospectively to mothers in the second sample. Using a cutoff score of 46, the authors reported that the APQ achieved a sensitivity of 82% and a specificity of 78% in the first sample and a sensitivity of 80% and specificity of 82% in the second sample. Posner and colleagues recommend that any gravida with an APQ score equal to or above 46 should be referred for psychiatric evaluation before delivery and followed closely during the postpartum period to detect any signs of postpartum depression.

Highly predictive of postpartum depression in Posner et al.'s studies were an unstable relationship with a part-

ner and past or current unavailability of what the women described as loving, caring parents. Also identified as significantly associated with subsequent postpartum depression were a history of emotional instability, including previous postpartum depression; poor self-esteem; insufficient income; and satisfaction with level of education. Posner and colleagues also reported that most obstetric and medical variables appeared to be irrelevant to the development of postpartum depression.

Updated Meta-Analysis

Thirteen significant predictors of postpartum depression were identified (Beck, 2001). Each of these 13 risk factors in the updated meta-analysis found to have a significant relationship with postpartum depression is defined below.

Prenatal depression. Depression during pregnancy was found to be one of the strongest predictor of postpartum depression. Prenatal depression can occur during any or all of the trimesters of pregnancy.

Child care stress. Stressful events related to child care involve factors such as the infant experiencing health problems and difficulty in infant care pertaining to feeding and sleeping.

Life stress. Life stress is an index of stressful life events during pregnancy and the postpartum. The number of life experiences along with the amount of stress created by each of the life events are combined to determine the amount of life stress a woman is experiencing. Stressful life events can be either negative or positive and can include experiences such as (a) marital changes (e.g., divorce, remarriage), (b) occupational changes (e.g., job change), and (c) crises (e.g., accidents, burglaries, financial crises, and illness requiring hospitalization).

Social support. Social support consists of receiving both instrumental supports (e.g., babysitting, help with household chores) and emotional support. Structural features of a woman's social network (husband/mate, family, and friends) include proximity of its members, frequency of contact, and number of confidants with whom the woman can share personal matters. Lack of social support occurs when a woman perceives she is not receiving the amount of instrumental or emotional support she expected.

Prenatal anxiety. Prenatal anxiety can occur during any trimester or throughout the pregnancy. Anxiety refers to feelings of uneasiness or apprehension concerning a vague, nonspecific threat.

Marital satisfaction. The degree of satisfaction with a marital relationship is assessed and includes how happy or satisfied the woman is with certain aspects of her mar-

riage, such as communication, affection, similarity of values (e.g., finances, child care), mutual activity and decision making, and global well-being.

History of previous depression. A mother reports having had a previous bout with depression before this pregnancy.

Infant temperament. Temperament of infants refers to their disposition/personality. Difficult infant temperament describes an infant who is irritable, fussy, unpredictable, and difficult to console.

Maternity blues. "Maternity blues is a transitory phenomenon of mood changes that begins within the first few days after delivery and can last 1 to 10 days or longer. It is characterized by tearfulness, anxiety, difficulty concentrating, irritability, and labile moods" (Beck, 1998a, p. 42).

Self-esteem. Self-esteem refers to a woman's global feelings of self-worth and self-acceptance. It is her confidence and satisfaction in herself. A low self-esteem reflects a negative self-evaluation and feelings about oneself or one's capabilities.

The PDPI-Revised can be used to guide nursing care that may allow earlier intervention for postpartum depression or prevent its onset.

Socioeconomic status. Socioeconomic status is a person's rank or status in society involving a combination of social and economic factors such as income, education, and occupation.

Marital status. This demographic characteristic focuses on a woman's standing in regard to marriage. The ranking assesses whether a woman is single, married/cohabiting, divorced, widowed, separated, or partnered.

Unwanted/unplanned pregnancy. This refers to a pregnancy that had not been planned or wanted by the woman. Many pregnancies in the United States are unplanned. Of particular note is the issue of pregnancies that are unwanted after initial ambivalence concerning identification of the pregnancy.

Located in Table 1 are the 13 risk factors and their effect sizes. Cohen (1988) offered guidelines for interpreting the magnitude of the effect sizes in a meta-analysis. For the r index, an effect size of .10 is considered small, whereas .30 is medium, and .50 or higher is large. The effect size indicator chosen for use in both the original and updated meta-analyses was r , which indicates the strength of the relationship between postpartum depres-

TABLE 1
Comparison of Predictors in the Original and Updated Meta-Analyses

<i>Predictor</i>	<i>Number of Studies</i>	<i>Original Meta-Analysis^a</i>	<i>Updated Meta-Analysis^b</i>	<i>Interpretation of Updated Effect Size</i>
		<i>Mean r Effect Size</i>	<i>Mean r Effect Size</i>	
Original				
Prenatal depression	21	.49-.51	.44-.45	Medium
Child care stress	7	.48-.49	.45-.46	Medium
Life stress	16	.36-.40	.38-.40	Medium
Social support	27	.37-.39	.36-.41	Medium
Prenatal anxiety	4	.30-.36	.41-.45	Medium
Marital satisfaction/relationship	14	.29-.37	.39	Medium
Depression history	11	.27-.29	.38-.39	Medium
Infant temperament	10	.32-.36	.33-.34	Medium
Maternity blues	5	.35-.37	.25-.31	Small/Medium
New Additions				
Self-esteem	6		.45-.47	Medium
Socioeconomic status	8		.19-.22	Small
Marital status	3		.21-.25	Small
Unplanned/unwanted pregnancy	6		.14-.17	Small

^aBeck (1996a).
^bBeck (2001).

sion and each of the predictor variables. The abbreviation for Pearson product-moment correlated is *r*.

As can be seen in Table 1, when the effect sizes of the 13 risk factors identified in the updated meta-analysis are interpreted, 10 predictors can be considered to have a medium relationship with postpartum depression and 3 predictors to have a small relationship. For each predictor, a range of effect sizes is included in the table. Effect sizes were calculated in three different ways: unweighted, weighted by sample size, and weighted by the quality index score. The strongest risk factors are self-esteem, prenatal depression, and child care stress. Unplanned/unwanted pregnancy is the weakest of the 13 significant predictors.

Also included in Table 1 is a comparison of the predictors and their effect sizes in the original and updated meta-analyses. The meta-analytic results confirmed all the predictors identified in Beck's (1996a, 1996b) previous meta-analyses and also revealed four additional risk factors for postpartum depression. The nine confirmed predictors were prenatal depression, child care stress, life stress, social support, prenatal anxiety, marital satisfaction/relationship, depression history, infant temperament, and maternity blues. The four new predictors identified in this updated meta-analysis were self-esteem, marital status, socioeconomic status, and unplanned/unwanted pregnancy.

In the original PDPI, the risk factors of child care stress and infant temperament were combined. Infant temperament was subsumed under the heading of child care stress. In the PDPI-Revised, these two predictors have been separated. The rationale for this decision was based on a growing body of research that examines these predictors separately. Child care stress includes a number of child care-related stressors such as a baby with health problems. Instruments such as the Childcare Stress Inventory (Cutrona, 1983) were used to measure this risk factor.

PDPI-Revised

The PDPI-Revised consists of 13 risk factors found to be related to postpartum depression in Beck's (2001) updated meta-analysis (see Table 2). All 13 relationships were found to be statistically significant. Guide questions for each predictor that clinicians can use during the interview process are also listed in Table 2. These guide questions are intended to assist health care providers in determining whether a risk factor is present in the woman being interviewed. The first 10 risk factors can be assessed during both the prenatal and postpartum periods. After a woman has delivered, the last three predictors, child care stress, infant temperament, and maternity blues, can be

TABLE 2*Postpartum Depression Predictors Inventory (PDPI)-Revised and Guide Questions for Its Use*

During Pregnancy		
<i>Marital Status</i>	Check One	
1. Single	<input type="radio"/>	
2. Married/cohabitating	<input type="radio"/>	
3. Separated	<input type="radio"/>	
4. Divorced	<input type="radio"/>	
5. Widowed	<input type="radio"/>	
6. Partnered	<input type="radio"/>	
<i>Socioeconomic status</i>		
Low	<input type="radio"/>	
Middle	<input type="radio"/>	
High	<input type="radio"/>	
<i>Self-esteem</i>	Yes	No
Do you feel good about yourself as a person?	<input type="radio"/>	<input type="radio"/>
Do you feel worthwhile?	<input type="radio"/>	<input type="radio"/>
Do you feel you have a number of good qualities as a person?	<input type="radio"/>	<input type="radio"/>
<i>Prenatal depression</i>		
1. Have you felt depressed during your pregnancy?	<input type="radio"/>	<input type="radio"/>
If yes, when and how long have you been feeling this way?		
If yes, how mild or severe would you consider your depression?		
<i>Prenatal anxiety</i>		
Have you been feeling anxious during your pregnancy?	<input type="radio"/>	<input type="radio"/>
If yes, how long have you been feeling this way?		
<i>Unplanned/unwanted pregnancy</i>		
Was the pregnancy planned?	<input type="radio"/>	<input type="radio"/>
Is the pregnancy unwanted?	<input type="radio"/>	<input type="radio"/>
<i>History of previous depression</i>		
1. Before this pregnancy, have you ever been depressed?	<input type="radio"/>	<input type="radio"/>
If yes, when did you experience this depression?		
If yes, have you been under a physician's care for this past depression?	<input type="radio"/>	<input type="radio"/>
If yes, did the physician prescribe any medication for your depression?	<input type="radio"/>	<input type="radio"/>
<i>Social support</i>		
1. Do you feel you receive adequate emotional support from your partner?	<input type="radio"/>	<input type="radio"/>
2. Do you feel you receive adequate instrumental support from your partner (e.g., help with household chores or babysitting)?	<input type="radio"/>	<input type="radio"/>
3. Do you feel you can rely on your partner when you need help?	<input type="radio"/>	<input type="radio"/>
4. Do you feel you can confide in your partner? (repeat same questions for family and again for friends)	<input type="radio"/>	<input type="radio"/>
<i>Marital satisfaction</i>		
1. Are you satisfied with your marriage (or living arrangement)?	<input type="radio"/>	<input type="radio"/>
2. Are you currently experiencing any marital problems?	<input type="radio"/>	<input type="radio"/>
3. Are things going well between you and your partner?	<input type="radio"/>	<input type="radio"/>

(continued)

TABLE 2
Continued

<i>Life stress</i>	Yes	No
1. Are you currently experiencing any stressful events in your life such as:		
financial problems	<input type="radio"/>	<input type="radio"/>
marital problems	<input type="radio"/>	<input type="radio"/>
death in the family	<input type="radio"/>	<input type="radio"/>
serious illness in the family	<input type="radio"/>	<input type="radio"/>
moving	<input type="radio"/>	<input type="radio"/>
unemployment	<input type="radio"/>	<input type="radio"/>
job change	<input type="radio"/>	<input type="radio"/>
After delivery, add the following items		
<i>Child care stress</i>		
1. Is your infant experiencing any health problems?	<input type="radio"/>	<input type="radio"/>
2. Are you having problems with your baby feeding?	<input type="radio"/>	<input type="radio"/>
3. Are you having problems with your baby sleeping?	<input type="radio"/>	<input type="radio"/>
<i>Infant temperament</i>		
1. Would you consider your baby irritable or fussy?	<input type="radio"/>	<input type="radio"/>
2. Does your baby cry a lot?	<input type="radio"/>	<input type="radio"/>
3. Is your baby difficult to console or soothe?	<input type="radio"/>	<input type="radio"/>
<i>Maternity blues</i>		
1. Did you experience a brief period of tearfulness and mood swings during the 1st week after delivery?	<input type="radio"/>	<input type="radio"/>
COMMENTS:		

assessed. Two demographic characteristics are now included in the PDPI-Revised: Marital status and socioeconomic status (SES). At risk are mothers who are single and have low SES.

The PDPI-Revised is not a self-report questionnaire, but instead is designed to be administered via an interview conducted by a clinician. The interview format provides a woman with an opportunity to discuss her experiences and any problems she may be experiencing regarding these risk factors. The completed PDPI-Revised results in targeted risk factors for which nursing interventions can be planned to address each woman's problems. The purpose of the PDPI-Revised is not to calculate a cutoff score above which a woman is flagged as at high risk for developing postpartum depression.

A comparison of the PDPI-Revised with the six previously designed screening instruments for women at risk for developing postpartum depression is shown in Table 3. These earlier instruments were devised to be used only

during pregnancy and do not assess child care stress, maternity blues, and infant temperament.

Implications for Research

Plans are under way also to develop a self-administered version of the PDPI-Revised. Future research will involve conducting a longitudinal study. Pregnant women will be recruited to complete this self-administered postpartum depression predictors inventory. Once these women deliver, they will be followed for at least 6 months to identify whether they develop postpartum depression. Psychometric properties of the self-administered inventory will be measured to assess its sensitivity and specificity in predicting who will or will not develop this devastating mood disorder.

Implications for Nursing Practice

Ideally, the PDPI-Revised will be completed once each trimester to update a pregnant woman's risk status. For

TABLE 3

Comparison of the PDPI-Revised With Previous Screening Instruments

<i>PDPI-Revised</i>	<i>Braverman & Roux (1978)</i>	<i>Petrick (1984)</i>	<i>Boyer (1990)</i>	<i>Appleby et al. (1994)</i>	<i>Stamp et al. (1996)</i>	<i>Posner et al. (1997)</i>
Prenatal depression			X	X		X
Life stress		X	X	X		
Social support		X	X	X	X	X
Prenatal anxiety		X	X	X		X
Marital relationship/satisfaction	X		X	X	X	X
Depression history	X	X	X	X	X	X
Self-esteem						X
Unwanted/unplanned pregnancy	X	X	X	X		
Marital status	X					
Socioeconomic status			X			X
Child care stress						
Infant temperament						
Maternity blues						X

example, a woman's prenatal anxiety can change from the 2nd to the 3rd trimester, and her risk of developing postpartum depression could change accordingly. The PDPI-Revised also should be used periodically after delivery to assess a woman's risk status. She can develop this mood disorder any time during the first 12 months after delivery. Women identified during pregnancy as being at risk for developing postpartum depression should be referred for telephone follow-up after delivery and, if possible, home visits should be made. Nurses should not wait until a woman's 6-week postpartum checkup to assess her status regarding postpartum depression. Some women may need to be referred for psychiatric evaluation for counseling or medication. Suicidal ideation should also be assessed by nurses and immediate emergency measures instituted if present.

The first step in preventing postpartum depression is the identification of women who are at high risk for this mood disorder.

Based on a synthesis of the findings from the updated meta-analysis, the following is a profile of a woman most at risk for developing postpartum depression. She is single, or if married, she is dissatisfied with her marital relationship. She has low socioeconomic status, low self-esteem, and a history of depression. Over the past year, she has experienced a number of life stressors, with the

addition now of child care stress. This pregnancy was neither planned nor wanted. During her pregnancy, she experienced anxiety and depression. After delivery, she experienced maternity blues for the 1st week postpartum. She describes her infant as being a difficult baby who is irritable and hard to console. Last, she does not feel that her partner, family, and friends have provided her with adequate emotional or instrumental support.

Clinicians need to remember, however, that risk indicates only the likelihood that women who are exposed to certain factors (risk factors) will subsequently develop postpartum depression. Risk factors or predictors are characteristics associated with an increased risk of being depressed postpartum. Some risk factors are inherited, whereas others are not. Some risk factors are modifiable, whereas others are not (Harkness, 1995).

Once the modifiable risk factors are identified, clinicians can target interventions to help decrease a woman's risk for developing this mood disorder. Often a combination of risk factors is identified that places a woman at high risk. Although risk factors are indicators of an increased probability of developing this postpartum mood disorder, they may or may not be directly related to its cause. It is important for clinicians to keep in mind, though, that the presence of a risk factor does not necessarily mean that a woman will develop postpartum depression.

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