

Postpartum Depression Causes and Correlates

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Abstract

A variety of explanations have been suggested to explain postpartum depression in women, including biological, psychological, social and cultural forces (Fossey, Papiernik & Bydlowski, 1987; O'Hara & Swain, 1996). This paper goes beyond biological explanations to explore psychosocial influences such as the cultural experience of giving birth, maternal expectations and the role of social support. Postpartum depression rates in Germany and the United States are compared, as are common birth and postnatal practices.

Introduction

A variety of possible causes and correlates of postpartum depression (PPD) have been discussed in the literature, including biological, psychological, social and cultural forces (Fossey, Papiernik & Bydlowski, 1987; O'Hara & Swain, 1996). The purpose of this paper is to explore possible causes and correlates of postpartum depression in a cross cultural perspective. Additionally, comparing the typical birthing experience (including prenatal and postnatal care) of two industrialized countries, Germany and the United States, may indicate correlates that may vary within similar countries. Incidence rates of postpartum depression in the United States and Germany are roughly similar. The U.S. rate is 8-12% (Najman, 2000), compared to a rate of 10-15% or 7-16% in Germany, depending on the source (Berger, 1998; Bergant, Nguyen, Heim, Ulmer & Dapunt, 1998). Complicating these rates is that within the United States and Germany, postpartum depression is often undiagnosed and untreated.

Identification of postpartum depression psychiatric symptoms, specifically psychosis, has existed for centuries, even as early as 700 B.C. with Hippocrates. However, postpartum illness was lumped together with other illnesses, including manic depression. The Diagnostic and Statistical Manual has varied in its articulation of postpartum symptoms in this century, alternately creating a category for the illness then eliminating it depending on the edition (Kruckman & Smith, 1998).

Definitions

The term postpartum depression (or PPD) is often a catchall term for depressive symptoms experienced after the birth of a child; however, before causes and correlates can be articulated, the three separate conditions women may experience postpartum must be articulated. Postpartum psychosis is on the severe end of the spectrum that includes the mild and common "baby blues," postpartum depression (PPD), and postpartum psychosis. Postpartum psychosis is relatively rare, with incidence rates according to one

source, of 1 in 1000 women (Depression After Delivery, 2000) and is often found in women who had psychiatric difficulties prior to becoming pregnant (Najman, Anderson, Bor, O'Callaghan & Williams, 2000). Symptoms of postpartum psychosis can include delirium, hallucinations, fatigue coupled with diminished thinking and response, rapid mood change, agitation, and confusion (Stern & Kruckman, 1983). An important function of studying postpartum psychosis, even though it is rather rare, is the insight it can offer into whether the primary causes of postpartum depression are biological or cultural. Solid data that shows comparable rates of postpartum psychosis cross-culturally supports theories of biological etiology (Kumar, 1994).

"Baby blues", also known as the "maternity blues" and "third day blues" (Fossey, Papiernik & Bydlowski, 1997), is the least severe of the three postpartum conditions and occurs immediately following birth to 2 weeks postpartum (Gruen, 1990). New mothers experiencing the "baby blues" suffer sleeplessness, anxiety and worry about the baby and their new responsibilities, feelings of being overwhelmed and lack of confidence in their ability, as well as irritability. Additionally, mothers may cry more frequently and have a lack of feeling for their baby (Gruen, 1990). The terms "baby blues" and postpartum depression are often confused or used interchangeably.

In the middle of the spectrum lies postpartum depression, which will be the focus of this review. The distinction between the baby blues and postpartum depression is often unclear. Postpartum depression is a depressive episode with onset occurring one month postpartum (Hagen, 1999). The one-month criterion was established by the American Psychiatric Association to distinguish postpartum depression from the far more common, transitory and less severe "baby blues" (APA, 1994). Symptoms of postpartum depression include persistent sad or anxious mood, loss of interest or pleasure in activities, restlessness, irritability, feelings of guilt, hopelessness and worthlessness, sleeping too much or too little, changes in appetite, difficulty concentrating, and even thoughts

of death or suicide. Mothers with postpartum depression commonly have thoughts of harming their children, exhibit fewer positive and more negative emotions toward them, are less responsive and less sensitive to infant cues, less emotionally available, have a less successful maternal role attainment, and have infants that are less securely attached (Hagen, 1999; Cohn et al., 1990).

Causes

Biological

One type of possible biological causes of postpartum depression includes hormonal changes. This theory points to a drop in estrogen levels postpartum and high levels of prolactin and cortisol relative to estrogen and progesterone after delivery as a cause of postpartum depression. However, there is weak evidence to support this theory (Stern & Kruckman, 1983; O'Hara et al., 1991).

Stress has also been studied as a possible cause of postpartum depression as it is known to contribute to depressive symptoms in other cases. In particular the stress of the birth experience and its influence on postpartum depression has been examined. However, because the birth experience is cross-culturally perceived as a stressful life event (Stern & Kruckman, 1983; Kumar, 1994), the perception of birthing as stressful cannot explain cultural differences in rates of postpartum depression. Some researchers suggest that a particularly difficult delivery can trigger the onset of postpartum depression, and some even support the diagnosis of post traumatic stress disorder in such cases (Fisher, et al., 1997). Caesarian section delivery is another delivery variable associated with postpartum depression, with women having caesarians having depression at six weeks after birth (Hannah, Adams, Lee & Glover, 1992). General life stress, including role conflict and strain, has also been considered as a possible cause of postpartum depression due to the biological implications of stress on the new mother. In the case of stress, whether it be from a difficult delivery or from general life stress and role issues, again, little decisive evidence supports stress as a cause for postpartum depression. Sleep deprivation, as well as histories of depression are also slated as possible biological causes for postpartum depression (Najman, et al., 2000). While sleep deprivation is a common complaint of many new mothers, there is little evidence to show it is a cause of postpartum depression, although women with a history of depression are more likely to experience depressive symptoms postpartum (O'Hara, et al., 1991). Hendrick et al. (1988) assert that the literature fails to decisively support any particular biological cause of postpartum depression. Therefore, the lack of clear biological causality suggests that social and psychological factors surrounding the birth experience deserve attention in the search for the etiology of the condition.

Cultural

An anthropological perspective on postpartum depression suggests that postpartum depression, as it is known in the U.S., does not fit into the worldview of cultures outside of Western/industrialized countries, and therefore those countries show a very low incidence of postpartum depression (Stern & Kruckman, 1983). Another possibility is that postpartum depression is simply ignored or goes unrecognized in these countries producing lower reported rates (Kumar, 1994). Anthropologists offer an explanation, however, of how these non-Western countries protect their new mothers from postpartum depression, suggesting that the condition is caused, and in these cases prevented, by psychosocial factors surrounding childbirth (Stern & Kruckman, 1983; Kumar, 1994).

One of the major psychosocial factors believed to prevent postpartum depression, which is commonly demonstrated in the birth traditions of non-Western countries, is a large supportive kin group (Kumar, 1994). In addition, these countries have extensive structuring of the time period following the birth of a child including rituals concerning the new mother. For example, a practice that continues to be practiced by new mothers in modern China that is "doing the month." For one month after the mother gives birth she is expected to avoid washing, avoid going outside, avoid excessive activity, stay away from others' homes, refrain from eating cold or raw foods, eat a lot of chicken, and avoid sex, reading and crying (Cox, 1998). Whether or not avoiding washing has a direct impact on the mother's mental health, the attention that is placed on the new mother at this time, coupled with the support received from the kin group is believed by anthropologists to be protective against postpartum depression (Cox, 1998).

In comparison, Western birth rituals typically end as soon as the new mother and baby leave the hospital (Cox, 1998). Western birth rituals play down the social experience of childbirth and tend to be associated with the medicalization of childbirth (Stern & Kruckman, 1983). New mothers receive little help and for a much shorter period of time. The time following the birth of a new mother is not very structured and the focus of rituals (e.g. baptism) is typically on the new baby rather than the needs of the new mother (Cox, 1998). New mothers are expected to resume old roles as well as new ones with very little time and help transitioning to fill societal expectations (Cox, 1998; Kumar, 1994). These differences in the psychosocial experiences of childbirth may account for the high rates of postpartum depression in the Western versus in non-Western cultures and suggest that it is a culture-bound syndrome (Stern & Kruckman, 1983).

Expectations

Expectations, both those that the mother to-be imposes on herself and those that she imposes on her

infant, encompass another major psychosocial correlate of postpartum depression. Mothers having expectations comes as no surprise, as the transition to parenthood marks a major milestone in family development and it can be a time of considerable stress as parents adapt to the new roles and responsibilities of taking care of a helpless and dependent infant.

Certain women are predisposed to developing depression following childbirth. Women who displayed higher levels of depressive symptoms during pregnancy, who had at least one previous episode of depression, or who had experienced premenstrual depression were all at increased risk for postpartum depression (O'Hara et al, 1991). The ability to adapt may be especially difficult for those women who are already vulnerable because of prior depression or other adjustment difficulties, and being a first-time parent (Campbell & Cohn, 1991; Cutrona, 1984; O'Hara, 1984; O'Hara et al, 1991). Women who already suffer from depression tend to feel more overwhelmed by the care of an infant; they commonly see their infants as more difficult and have an overall negative perception of their infants (Campbell et al, 1992; Whiffen & Gotlib, 1989). In addition, new mothers must redefine themselves in terms of their self-concepts, lifestyles, roles and relationships with others, must learn to read and respond appropriately to their infant's communications and to provide physical care as well as cognitive and social/affective stimulation to a rapidly changing infant; they must also learn to balance the needs of the baby with their own needs and those of their spouse (Ruble et al, 1990).

In struggling to maintain this balance, women may endure some unexpected stressors, the first of which are mainly psychosocial. Concerns about childcare are often predictive of self-reported depressive symptoms (Cutrona, 1984). Concerns during pregnancy also create stress that may contribute to the onset of postpartum depression. In one study, depressed women found their pregnancies more stressful and were less likely to have planned to become pregnant, and a small majority acknowledged feeling unhappy about it (Campbell et al, 1992). In addition, a significant number of depressed women reported feeling worried during pregnancy, and these worries may have been due to higher rates of minor pregnancy and delivery complications (Campbell et al, 1992).

In the literature, obstetric stressors have had varying relationships to depression following pregnancy. Subjective stress of pregnancy and labor complications have been shown to be correlates of postpartum depression (Paykel et al, 1980). In other studies, postpartum depression was associated with less complicated deliveries (O'Hara et al, 1982; Paykel et al, 1980), while in others it is not associated with a complicated pregnancy (Warner et al, 1996). The reasons for these diverse outcomes are manifold, but a

possible explanation is that women who experience more difficulty around labor and delivery receive more attention and support from nursing staff and family in the first week after delivery, which may serve to mitigate the effects of the stressful obstetric events (O'Hara, 1991).

Another common expectation involves the birth experience. Manning & Wright (1983) demonstrated that the mother's assessment of her potential for having an enjoyable birth experience is correlated to her assessment that an enjoyable birth experience will lead to a healthy baby. Other studies support the use of childbirth training classes to possibly mitigate the effects of depression. Willmuth et al (1978) found that among women who took prepared childbirth training, the vast majority expressed greater satisfaction with the childbirth experience and reported that they experienced less pain than they had anticipated. The relationship between prepared childbirth training as a protective factor against postpartum depression warrants further exploration.

Aside from the expectations that a mother-to-be may self-impose, she may also place expectations on what the literature calls the "quality" of her infant. Infant quality includes the health status and behavior of the infant. Although there is a dearth of postpartum literature that addresses the issue, the existing literature suggests that postpartum depression can be triggered if an infant does not meet the mother's expectations. In one study, postpartum depression was predicted by the perception that the infant was below average (Atkinson & Rickel, 1984). Another study demonstrated that prematurity was a correlate of postpartum depression (Kumar & Robson, 1984). Hopkins et al (1987) found that infant irritability and health status were associated with postpartum depression.

Post birth, women may have trouble when realizing that certain expectations they held about their new role and responsibilities are inaccurate or overwhelming. For some new mothers, the feelings of depression that they experience may seem abnormal to them: a new child is supposed to be a positive and happy experience (Fossey, et al, 1997). These mothers think "normal women don't act like this, there must be something wrong with me" and therefore won't see help. New mothers may also have too high of expectations for themselves, thinking that being a mother is easy and that she must take on the majority of the duties of the child and the household because taking care of the family is the woman's responsibility (Cowan & Cowan, 1988).

The confidence that the woman has in her ability to be a mother is another correlate of postpartum depression. When first time mothers completed questionnaires during their last trimester and 2-3 months postpartum, the mother's confidence in her ability to be a mother was related to depression, as

measured by the Edinburgh Postnatal Depression Scale. Those mothers who had higher depression scores were also the ones that had lower scores on scales measuring their confidence (Fowles, 1998).

Social Support

Because the transition to motherhood is a difficult one, new mothers need the help of significant others via social support. Social support falls into four basic categories: instrumental or tangible aid; informational, consisting of advice or information; emotional or love and caring; and appraisal, consisting of reassurance and feedback (Friedman, 1991, cited in Logsdon, Birkimer & Barbee, 1997). The mother's satisfaction with social support has been related to postpartum depression (Brugha, Sharp, Cooper, Weisender, Britto, Shinkwin, Sherrif & Kirwan, 1998). In fact, past research indicates that women have lower rates of postpartum depression when reporting that they are cared for by partners, relatives and friends, including receiving emotional support from partners and others; receiving assistance from their husband or partner with duties around the house (Gjerdingen & Chaloner, 1994), and have a larger circle of people to help out in the postpartum period (Logsdon, et al, 1997).

Social support is not only important during the postpartum period: whether the mother receives support during the birthing experience may predict later depression. Some evidence exists proposing that midwives and doulas can provide support during the birth experience (Trotter, Wolman, Hofmeyr, Nikodem & Turton, 1992). In studies of over 1500 women involving comparisons of outcomes with and without much social support during labor, there has been a major reduction in the length of labor, a greater than fifty percent drop in cesarean sections, and a remarkable drop in the mothers' need for pain medication, thanks to continuous support by doulas (Klauss, Kennell & Klauss, 1993). Many studies have significantly shown that mothers with the shortest labor were those women who had a doula present throughout their labor (Sosa, Kennell, Robertson & Urrutia, 1980). In the postpartum period, the constant support of a doula during labor on the subsequent psychological health of the women and infants is linked to better health of the mother (Hofmeyer, Nikodem & Wolman, 1991).

Social support from the woman's partner can also shape how the mother feels about the birth: for a group of married women, their husband's presence during the birth positively influenced the mothers' reports of having a more pleasant birth experience (Doering, Entwisle & Quinlan, 1980).

Comparing the United States and Germany

Prenatal Care and the Birthing Experience

Guidelines for prenatal care in Germany and the United States vary with regard to number and type of

recommendations. However, there is variability within the United States as well, so actual practice may not be exactly as reported (Haertsch, Campbell & Sanson-Fisher, 1999). In Germany, the existence of a national insurance program guarantees all women have access to prenatal care (Bueche, 1990), while lack of prenatal care is still a concern in the United States. Such care can help women to have a less complicated pregnancy and birth, as well as healthier infants.

The rate of midwife delivery appears to have differed between the U.S. and Germany as well. Prior to reunification, a Munich hospital utilized midwives in a majority of the births, with physicians ready to assist if complications arose; whether this practice has continued is not clear (Bueche, 1990). As the number of births in the United States with certified nurse midwives increases (National Center for Health Statistics, 1998), it will be interesting to see if the rate of postpartum depression changes. Furthermore, higher caesarian section rates in the U.S., but an increase in the number in Germany (Bueche, 1990), may influence postpartum depression rates as well.

Although the importance of support of the partner was recognized in both Boston and Cologne, with partners encouraged to participate in the birth experience (Scopesi, Zambini & Carossin, 1997), social support provided to women by the healthcare field in the postpartum period varies between the two countries. Time of discharge has been linked to postpartum depression, with early discharged women at a higher risk (Hickey, Boyce, Ellwood & Morris-Yates, 1997). New mothers in Germany typically stay in the hospital longer after giving birth and have more flexible maternity leave than in the United States (Bueche, 1990). German women are provided with education and support from a nursery nurse in the postpartum period (Bueche, 1990), however, when mothers at hospitals in the U.S. were compared with Cologne and two other European cities, the U.S. hospital provided more medical aftercare than those in Germany, including telephone lines open 24 hours a day for assistance and short term home visits in the postpartum period (Scopesi, et al, 1997).

Treatment

For those who are diagnosed in the United States, psychiatric counseling and prescription medication is the common medical treatment. Germany, however, has opted for using the herb St. John's Wort for treatment of depression with doctors widely reporting the success of the natural supplement (Bender, 1996). In 1997, the National Institutes of Health began a study comparing treatment outcomes of depressed patients receiving St. John's Wort to those receiving a placebo and others receiving a selective serotonin reuptake inhibitor (NIH, 1997). The results of this study may dramatically change what medical treatment is the standard for depression, including postpartum depression, in the United States.

Both the United States and Germany have self help groups and informational centers/associations offering assistance to mothers with postpartum depression (Verein Schatten & Licht, 1996). In the United States, supplementing a variety of sources specifically addressing postpartum depression (Appendix A), are organizations like Healthy Start that provide informational services to new parents (HCHD, 2000). Complementing the healthcare system providers there are several associations in Germany for mothers with postpartum depression (Appendix B).

Conclusion

Because maternal experiences in the United States and Germany vary somewhat, but the incidence rates are roughly similar, it is not possible to pinpoint one exact cause of postpartum depression. It is surprising that Germany, known for its health care still has a reportedly higher rate of postpartum depression than the United States. It appears that a variety of forces may be at work, with some exerting a greater influence on some women than on others. Therefore, prevention and treatment plans need to be multifaceted, including biological concerns, psychological issues and the support network.

References

Atkinson, A.K., & Rickel, A.U. (1984). Postpartum depression in primiparous parents. *Journal of Abnormal Psychology, 93*, 115-119.

Bender, K.J. (1996). St. John's Wort evaluated as herbal antidepressant. *Psychiatric Times, 13*(10). On-line: <http://www.mhsource.com/pt/p961058.html>

Bergant, A.M., Nguyen, T., Heim, K., Ulmer, H., & Dapunt, O. (1998). Deutschsprachige fassung und validierung der "Edinburgh postnatal depression scale". *Dtsch Med Wochenschrift, 123*, 35-40.

Berger, S. (1998). Stimmuntief im Wochenbett. *Schweiz Med. Wochenschrift, 128*, 1127-1133.

Bueche, M.N. (1990). Maternal-infant health care: A comparison between the United States and West Germany. *Nursing Forum, 25*(4), 25-29.

Campbell, S.B., & Cohn, J.F. (1991). Prevalence and correlates of postpartum depression in first-time mothers. *Journal of Abnormal Psychology, 100*, 594-599.

Campbell, B., Cohn, J.F., Flanagan, C., Popper, S., & Meyers, T. (1992). Course and correlates of postpartum depression during the transition to parenthood. *Development and Psychopathology, 4*, 29-47.

Cohn, J.F., Campbell, S.B., Matias, R. & Hopkins, J. (1990). Face-to-face interactions of postpartum depressed and nondepressed mother-infant pairs at 2 months. *Developmental Psychology, 26*, 15-23.

Cowan, C.P & Cowan, P.A. (1988). Who does what when partners become parents: Implications for men, women and marriage. *Marriage and Family Review, 12*(3-4), 105-131.

Cox, J. (1998). Childbirth as a life event: Sociocultural aspects of postnatal depression. *Acta Psychiatrica Scandinavica, 78*, 75-83.

Cutrona, C.E. (1984). Social support and stress in the transition to parenthood. *Journal of Abnormal Psychology, 93*, 278-90.

Fisher, J., Astbury, J., & Smith, A. (1997). Adverse psychological impact of operative obstetric interventions: A prospective longitudinal study. *Australian and New Zealand Journal of Psychiatry, 31*, 728-738.

Fossey, L., Papiernik, E., & Bydlowski, M. (1997). Postpartum blues: A clinical syndrome and predictor of postnatal depression. *Journal of Psychosomatic Obstetrics and Gynecology, 18*, 17-21.

Fowles, E.R. (1998). The relationship between maternal role attainment and postpartum depression. *Health Care for Women International, 19*, 83-94.

Gruen, D. (1990). Postpartum depression: A debilitating yet often unassessed problem. *Health and Social Work, 15*(4), 261-270.

Haertsch, M., Campbell, E., & Sanson-Fisher, R. (1999). What is recommended for healthy women during pregnancy? A comparison of seven prenatal clinical practice guideline documents. *Birth, 26*, 24-30.

Hagen, E.H. (1999). The functions of postpartum depression. *Evolution and Human Behavior, 20*, 325-59.

Hannah, P., Adams, D., Lee, A., & Glover, V. (1992). Links between early postpartum mood and postnatal depression. *British Journal of Psychiatry, 160*, 777-780.

HCHD (2000). Healthy Start. On-line: <http://www.hillscountyhealth.org/family>.

Hendrick, V., Altshuler, L., & Suri, R. (1988). Hormonal changes in post partum and implications for post partum depression. *Psychosomatics, 39*, 93-101.

Hofmeyer, G.J., Nikoderm, V.C., & Wolman, W.L. (1991). Companionship to modify the clinical birth environment: Effects of progress and perceptions of labour and breast feeding. *British Journal of Obstetrics and Gynecology, 98*, 758-764.

Hopkins, J., Campbell, S.B., & Marcus, M.D. (1987). The role of infant-related stressors in postpartum depression. *Journal of Abnormal Psychology, 96*, 237-241.

Klaus, M.H., Kennel, J.H. & Klaus, P.H. (1993). *Mothering the mother: How a doula can help you have a shorter, easier and health birth*. Reading, MA: Perseus Books.

Kruckman, L., & Smith, S. (1998). An introduction to postpartum illness. On-line: <http://www.chss.iup.edu/postpartum/preface.html>

Kumar, R., & Robson, K.M. (1984). A prospective study of emotional disorders in childbearing women. *British Journal of Psychiatry, 144*, 35-47.

Logsdon, M.C., Birkimer, J.C., & Barbee, A.P. (1997). Social support providers for postpartum women. *Journal of Social Behavior and Personality*, 12, 89-102.

Manning, M.M., & Wright, T.L. (1983). Self-efficacy expectancies, outcome expectancies and the persistence of pain control in childbirth. *Journal of Personality and Social Psychology*, 45, 421-431.

Najman, J.M., Anderson, M.H., Bor, W., O'Callaghan, M.J., & Williams, G.M. (2000). Postnatal depression – myth and reality: maternal depression before and after the birth of a child. *Social Psychiatry and Psychiatric Epidemiology*, 35, 19-27.

National Center for Health Statistics (1998). Press Release: New study shows lower mortality rates for infants delivered by certified nurse midwives. May 19, 1998.

NIH (1997). St. John's Wort study launched. *Science Daily*. On-line:
<http://www.sciencedaily.com/releases/1997/10/971005124240.htm>

O'Hara, M.W., Neunaber, D.J., & Zekoski, E. (1984). Prospective study of postpartum depression: prevalence, course and predictive factors. *Journal of Abnormal Psychology*, 93, 158-171.

O'Hara, M.W., Rehm, L.P., & Campbell, S.B. (1982). Predicting depressive symptomatology: Cognitive-behavioral models and postpartum depression. *Journal of Abnormal Psychology*, 91, 457-61.

O'Hara, M.W., Schlechte, J.A., Lewis, D.A., & Varner, M.W. (1991). Controlled prospective study of postpartum mood disorders: Psychological, environmental, and hormonal variables. *Journal of Abnormal Psychology*, 100, 63-73.

O'Hara, M.W., & Swain, A.M. (1996). Rates and risk of postpartum depression: A meta-analysis. *International Review of Psychiatry*, 8, 37-58.

Paykel, E.S., Emms, E.M., Fletcher, J., & Rassaby, E.S. (1980). Life events and social support in puerperal depression. *British Journal of Psychiatry*, 136, 339-346.

Ruble, D.N., Brooks-Gunn, J., Fleming, A.S., Fitzmaurice, G., Stangor, C., & Deutsch, F. (1990). Transition to motherhood and the self: Measurement, stability and change. *Journal of Personality and Social Psychology*, 58, 450-463.

Scopesi, A., Zanobini, M., & Carossino, P. (1997). Childbirth in different cultures: Psychophysical reactions of women delivering in the U.S., German, French and Italian hospitals. *Journal of Reproductive and Infant Psychology*, 15, 9-30.

Sosa, R., Kennel, J.H., Robertson, S., & Urrutia, J. (1980). The effect of a supportive companion on perinatal problems, length of labor and mother-infant interaction. *New England Journal of Medicine*, 303, 597-600.

Trotter, C., Wolman, W.L., Hofmeyr, J., & Nikodem, C. (1992). Effect of social support during labour on postpartum depression. *South African Journal of Psychology*, 22, 134-139.

Warner, R., Appleby, L., Whitton, A., & Faragher, B. (1996). Demographic and obstetric risk factors for postnatal psychiatric morbidity. *British Journal of Psychiatry*, 168, 607-611.

Whifen, V.E., & Gotlib, I.H. (1989). Infants of postpartum depressed mothers: Temperament and cognitive status. *Journal of Abnormal Psychology*, 98, 274-79.

Willmuth, L., Weaver, L., & Borenstein, J. (1978). Satisfaction with prepared childbirth and locus of control. *Journal of Obstetrical and Gynecological Nursing*, 7, 33-37.

Appendix A

Resources for Postpartum Depression in the United States

Postpartum Assistance for Mothers (PAM)
P.O. Box 20513
Castro Valley, CA 94546
Work: (510) 727-4610

Postpartum Support International
927 North Kellogg Ave.
Santa Barbara, CA 93111

Postpartum Education for Parents
(805) 564-3888

www.postpartum.net (has directory of services by state)

Appendix B

Resources for Postpartum Depression in Germany

Bund Deutscher Hebammen e.V.
Steinhäuserstraße 22
76135 Karlsruhe
Tel.: 07 21 / 98 18 90

Menschenkind - Beratungsstelle für Eltern mit Säuglingen und Kleinkindern
Elsässer Straße 27a
22049 Hamburg
Tel.: 0 40 / 6 52 00 12

Mütterzentren - Bundesverband e.V.
Müggenkampstraße 30a
20257 Hamburg
Tel.: 0 40 / 40 17 06 06

Notmütterdienst, Familien- und Altenhilfe e.V.
Sophienstraße 28

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Merrit, Kuppin, & Wolper

60487 Frankfurt/Main
Tel.: 0 69 / 77 66 11 oder 00 69 / 77 90 81
(vermittelt Ersatzmütter für die Zeit des Wochenbetts)

Paritätisches Bildungswerk,
Bundesverband e.V.
Heinrich-Hoffmann-Straße 3
60528 Frankfurt/Main
Tel.: 0 69 / 67 06 - 2 20

Pro Familia, Bundesverband
Stresemannallee 3
60596 Frankfurt
Tel.: 0 69 / 63 90 02

Sozialpsychologisches Zentrum für Mutter und Kind,
Mütterhaus Berlin
Anna-Ebermann-Straße 26
13053 Berlin
Tel.: 0 30 / 9 86 41 28

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