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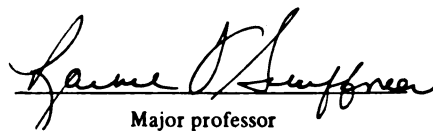
LOSS IN A MOTHER'S SOCIAL SUPPORT NETWORK
AND ~~THE~~ RELATION TO DEPRESSION
IN THE POSTPARTUM PERIOD

presented by

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has been accepted towards fulfillment
of the requirements for

M.S.N. degree in NURSING


Major professor

Date 14 December 1998

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LOSS IN A MOTHER'S SOCIAL SUPPORT NETWORK AND
THE RELATION TO DEPRESSION IN THE POSTPARTUM PERIOD

By

Marianne Jurczynszyn Ball

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF SCIENCE

College of Nursing

1998

ABSTRACT

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By

Marianne Jurczynszyn Ball

New motherhood is a time of transitions and dependencies with new roles and emotions. During this period a woman surrounds herself with those persons she perceives as integral to her support, her social support network (SSN). During postpartum, four to fifteen percent of new mothers experience Postpartum Depression (PPD). This non-experimental correlational study, guided by Roy's Theory of Adaptation, was a secondary analysis exploring support network relationship and loss during the prenatal and/or postpartum period and its impact on depressive symptomatology. The sample was 33 low income pregnant women from Jackson County attending a not-for-profit prenatal clinic, and reporting at least two persons in their SSN. No significant association was identified between loss in the network and depressive symptomatology with the prenatal CES-D as covariate. Concepts related to recognition of risk factors must continue to be explored to decrease PPD and its cost, and increase healthier mother-infant/family relationships. The APN must focus on screening techniques for depression while interacting with mothers during prenatal and well baby visits.

To Barry

My friend, lover, and husband
of 22 years. You are the reason.

ACKNOWLEDGEMENTS

With deep gratitude to my thesis chair, Rachel Schiffman, R.N., Ph.D for her encouragement, wisdom, and guidance; and to Linda Spence, R.N., Ph.D. and Mildred Omar, R.N.C., Ph.D., for their patience and expertise during my journey.

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Introduction

Women experience many transitions going from a pre-pregnant state to one of motherhood. In this multifaceted, changing role, multiple and complex factors influence outcomes of pregnancy. During this transitional phase, seventy-five percent of new mothers experience varying degrees of depressive symptomatology in the postpartum period (Kumar, 1990). Exploring loss in a mother's support network and the impact on depressive symptomatology may aid in proactive management and prevention of depression during postpartum.

Pregnancy and new motherhood are a time of transitions and dependencies. New roles, responsibilities and emotions surround the mother. During pregnancy, a woman prepares herself and those with whom she is closest for the coming birth of a new family member. Relational behavior dynamics of the family and support system affect a woman as she progresses through the pregnancy.

Rubin (1984) examined developmental tasks through which women advance during the antepartum period and found ensuring acceptance of the pregnancy and birth by the family and those closest to her, to be important in the transition to, and acceptance of, the maternal role. It follows that appropriate support from those close to the mother during the antepartum period may play a key role in positive

psychosocial outcomes and the transition a woman makes into motherhood after her child is born.

It has been recognized that transitions or changes in one's life are generally better managed when support from others is given (Thoits, 1984). Therefore, the majority of women work hard at the task of establishing a reliable support network to see them through the pregnancy and the challenges of role acceptance and motherhood that await them after the birth (Rubin, 1984). A key issue to the mother's adaptation to changes brought about by pregnancy/motherhood and role, is the support given by those who are significant to the mother, her convoy or social support network (Gjerdingen & Chaloner, 1994; Kahn & Antonucci, 1981; Zachariah, 1994). It is the husband/partner, the woman's mother, family, and close friends who have exhibited sensitivity to, and perception of the mother's needs that are generally chosen for the network (Rubin, 1984).

The social support resource provided by the network members has not been found to dramatically alter the stressors of pregnancy, but is thought to be protective in nature and moderate the impact of stress, while facilitating coping for the mother (Aaronson, 1989). Significant life changes, like those of pregnancy and motherhood, for women with high psychosocial resources have been found to modify potentially pathological effects from life stresses and those women with low resources demonstrated greater

depressive symptoms (Norbeck & Tilden, 1983). Therefore, deficits in social integration and lack of reliable alliances with others have been found to place the mother at risk for postpartum depression (Collins, Dunkel-Schetter, Lober, & Scrimshaw, 1993; Logsdon, McBride, & Birkimer, 1994).

It appears to be adequate support resources that enables the mother to transition through life's stressors. Pregnancy and motherhood, with their challenges, are such stressors. Norbeck and Tilden (1983) identified pregnancy as a maturational crisis or a time when additional support is necessary for successful crisis resolution. Themes of physical adjustment, initial insecurities, lack of support networks, and loss of former identity, were found to be coping resources needed by these mother's during the postpartum period (Nicolson, 1990).

The normative stressors of pregnancy and motherhood, including loss of time and sleep, change in appetite and body image, and new identity realities and role development engage the mother to seek additional social support resource. As the rapid changes accelerate her life, the new mother looks for aid, affirmation, and affect (Kahn, 1979) from those closest to her. A question then remains, will a woman who loses social support through loss of a member of her network during pregnancy or postpartum be at higher risk

for developing symptoms of depression at this crucial and transitional time.

Statement of the Problem

Loss of a significant person in life can be a difficult adjustment. During pregnancy or the postpartum period, loss complicates the physical and emotional changes new mothers' experience. A loss that is recognized as perceived change in support during pregnancy or in the period immediately after birth, may adversely affect the mother, given social support and its association with health and well-being (Aaronson, 1989).

Awareness of a loss in the social support network may be so overwhelming to a mother, due to its valuation, she may be unable to normalize her feelings of the loss, potentially impacting her progress through the responsibilities and role acceptance the birth brings (Rubin, 1984). As her external awareness diminishes and she focuses more internally to grieve the loss, the mother may be unable to institute coping mechanisms and strategies to decrease the trauma and pain the loss has produced. This, compounded by psychological and physiological changes of the pregnancy and birth, may likewise, place the mother at an emotionally unstable point where she is unable to progress through the normal stages of the grieving process and thus, be unable to resolve the loss emotionally. The failure of

grief to resolve in itself keeps energy bound to the past and to the loss (Schneider, 1984).

Because losses vary in terms of how significant they are, no one can determine the significance of a loss to the mother. The loss of a significant other, who would have met many needs, is a major loss in the support network. All losses threaten a way of life and are compounded by the importance and closeness of the relationship which no longer exists. These changes may be beyond the mother's ability to cope (Schneider, 1984).

Loss challenges the mother's internal and external resources (Galbreath, 1990) in as much as the support network has been intentionally selected for the support resource each member provides the mother (Kahn & Antonucci, 1981). Thus, loss diminishes the resource the mother has worked to establish, even if the relationship is one of enabling and encouraging of high risk behaviors. If the mother values the relationship, the loss still diminishes a perception of positive support resource.

If a loss is experienced, additional resources may be provided to the mother by the membership of the network. However, the resource provided may be in terms of functional support rather than in terms of emotional. It is the pregnant woman who defines expectations of the type of resource each individual provides to her. Emotional investment ties members to one another on an altruistic

level, with sensitivity to the other's needs. Individuals develop emotional relationships with others that preclude immediate emotional replacement by any other individual if the relationship is lost (Schneider, 1984). The mother, finding aspects of defined network support she perceives as important or necessary to be lacking, due to loss in the network, may be unable to cope or adjust to this circumstance.

Material aspects of the support resource may be replaced by others in the support network, but if the emotional aspects of aid, affirmation and affect are missing through the mother's perceptions, the buffering of stressors may not be available to her. Feelings of lack of control and inadequate emotional support, as perceived by the mother could potentially impact the outcome of pregnancy and birth (role acceptance) (Rubin, 1984).

For those mothers experiencing a loss during pregnancy or immediately postpartum, it is important to examine any potential association existing between the loss and increased depressive symptoms in the postpartum period. A mother's ability to cope with loss may be key in establishing appropriate behaviors in the postpartum period after loss is experienced.

Research Question

The research question in this study was: Is there a difference in postpartum depressive symptomatology among

women who experience loss of a husband or partner during pregnancy and/or postpartum; those losing a parent, another relative, friend or other member of their social support network; and those who do not experience loss, after adjusting for prenatal depressive symptomatology?

Purpose of the Study

In the literature, little has been found regarding loss of a support member during pregnancy or the postpartum period and risk for depression. However, social support has been well researched as a factor in prevention of depression in postpartum (Cutrona & Russell, 1989; Nicholson, 1990) and has been cited by many researchers as a direct link to the risk of depression (Affonso, Lovett, Paul, Arizmendi, Nussbaum, Newman, & Johnson, 1991; Cutrona & Russell, 1989; O'Hara, Neunaber & Zekoski, 1984; Milgrom, 1994; Nicolson, 1990; Norbeck & Tilden, 1983). The relationship of a spouse or significant other has been cited to be of importance in times of stress. A close, confiding relationship with another person, usually a significant other, has been demonstrated to protect against distress during pregnancy and the postpartum period (Affonso et al., 1991; Brown, 1986).

Therefore, the focus of this study was particularly narrow to evaluate the loss of membership in a woman's support network, defined in terms of support resource lost. If factors supporting the research question were to be found

significant, there would be reason to institute proactive measures during prenatal visits to aid in prevention of depressive symptomatology.

Because depression and its symptomatology impact not only the individual, but also the family and society, it has major financial significance. For the postpartum family, depression affects all family members. Productive work loss of the mother and those assuming her role responsibilities, expense of treatment for the depression, and out of family help for maintenance, are but a few of the financial concerns the family must face.

The expense of depression on the family involves not only the resource issues, but those of risk for dysfunction. When the mother is unable to undertake her maternal role, others must assume her responsibilities. Stress is created and affects each family member's coping strategies. Maternal depression has been correlated significantly with physical abuse of children, disturbed mother-child relationships, childhood behavioral disorders, accidental injury to children and language delays (Grieppsma, Marcollo, Casey, Cherry, Vary, & Walton, 1994).

Families may express coping through anger or withdrawal from each other. Changes in relationship with partners may be encountered due to decrease in communication, the tendency of depressed women to withdraw, and the diminishing of intimacy (Martell, 1990a). Depressed mothers have been

found to have different styles of interacting with their infants than do nondepressed mothers, placing the child at risk for attachment issues and behavioral problems (Affonso & Domino, 1984; Cutrona & Troutman, 1986). Mother-infant bonding, the emotional and physical well-being of the baby and older children, and the marriage itself are placed in jeopardy.

According to the U.S. Department of Health and Human Services (1993), one in eight individuals may require treatment for depression in their lifetime. This is over six million Americans or about 15 % of the population. Direct, and indirect costs from loss of productivity due to depression accounts for approximately \$16 billion dollars per year in health care costs. In the primary care setting, depression is the seventh most common outpatient diagnosis (Parchman, 1993). The postpartum period is repeatedly cited as a risk factor for depression (Depression Guideline Panel, 1993; DSM IV, 1994; Kumar, 1990; Parchman, 1993).

With the growing concerns regarding health care costs and the lack of definitive information regarding causation of depression (Beck, 1993), studies exploring predictors will increase ability to address prevention in postpartum women. Decreasing depression and depressive symptomatology by recognizing risk factors predisposing mothers to depression in the postpartum will potentially impact rates, and in turn, decrease health care costs for the nation.

Because depression in the postpartum period has become an ever increasing concern for health care providers, there is a need to examine potential contributors.

With an incidence of postpartum depression of 10 to 15 %, (Depression Guideline Panel, 1993), there is significant need for the Advanced Practice Nurse (APN) to determine factors which may help identify women who are at-risk for depressive symptomatology. There is a need to investigate loss and the relationship of the loss within a woman's support network, and determine any psychological impact and potential problems in the postpartum period this loss could bring. Impact on the family, relationship between infant and mother, and the financial aspects of depression are but a few of the reasons to examine the factors of loss during and after pregnancy. Significant findings will benefit health care providers who may take a proactive role throughout the prenatal period in reducing depressive symptomatology in mothers experiencing loss.

Conceptual Definitions

Social support network, loss in the social support network, and postpartum depression were the key concepts of this study. Their relationship within the research question are explained in this section.

Social Support Network

The people with whom we surround ourselves, are the group of individuals with whom we interact during the

special times in life, and for everyday support and sharing. For each individual, this group or network takes on a unique dimension based on perceived need of the network's originator and the resources brought to the network by the membership, as perceived by the mother. The relationship between the mother and the membership of the network is one of shared resources. Development and maintenance of the network is the life-long task of the originator. The constant dynamism of the network matches an individual's needs through life's path. Perceived resources that are needed match the life events the individual is experiencing at any given time. This is the basis of the social support network.

May (1992) conceptualized social support network as those people important to an individual with their function being that of providing social support. Mercer and Ferketich (1988) defined the support network as "connections that people have with others in their environment" (p. 27), a type of social embeddedness. Kahn and Antonucci (1981) conceptualized the support network as the set of persons who are related to one another by giving and receiving support. Further, the network is defined as having the following three characteristics: size, source of support, and duration of the support relationship. Within this definition of the support network, is the concept of resource provided or functional aspect of social support. Norbeck, Lindsey, and

Carrieri (1981) established their definition of personal support network based on works of Kahn (1979) for the Norbeck Social Support Questionnaire, as "each significant person in your life...all the persons who provide personal support for you or who are important to you now." (p. 265). In this study, it was the property of source of support, that is, relationship to the mother, that was a focus.

Husbands, significant others, parents, family members and friends are the most common relationships of which a network is composed (Collins et al., 1993; May, 1992; Mercer & Ferketich, 1988; Norbeck & Anderson, 1989). These and other authors (Mercer & Ferketich, 1988; Norbeck & Anderson, 1989; Norbeck & Tilden, 1983) have broadened the definition of the support network to include work and school associates, neighbors, health care providers and church officials.

The social support network provides the resource of social support to the individual. Elements of support are the underpinnings of interpersonal transactions between a social network of people. According to Kahn's (1979) conceptualization, the support resources of aid, affirmation and affect are provided by means of those individuals closest to a person, that person's social support network or "convoy". These are the people in an individual's life that give and receive support. Integrated with this concept, is one of change and movement along an individual's lifespan

and the dynamism of the support network which is moving with that individual (Reece, 1993).

A strong interactive social support network has long been associated with health and well-being, emotionally, physically and psychologically. In general, support resource has direct, indirect, and interactive effects on physical and mental health, enhances health outcomes, and reduces mortality and morbidity (Stewart, 1993). It has been found that the support network acts protectively against negative life events, counterbalancing the effects of stress (Thoits, 1984).

The perceived network support is the cognitive appraisal of the resource available to the individual from significant others (Turner, Grindstaff, & Phillips, 1990). Polomeno (1996) states, "this type of support reflects the caring that is available and the sense of interconnectedness and belongingness with significant others", with significant others referring to those individuals identified as important to the mother. As within any life circumstance, the position of the individual within the boundaries of the support network and their importance to the event is based on their contribution to the event and the relationship of each individual to the mother. It would generally appear that significance or importance/closeness, as perceived by the mother, would normally be attributed to the father/partner or, if not available for support to the

mother, to a parent or other family member (Chalmers & Meyer, 1994; Lederman, 1984; Westbrook, 1978; Zachariah, 1994).

The importance of the relationship within a network that the husband/partner has as a social support resource, is recognized by Collins et al. (1993) as they defined composition of the network resource in terms of living with the baby's father. Zachariah (1994) found social support by a partner and a woman's mother to assume more importance to a women during pregnancy compared to other sources of social support.

A woman's partner or parent, usually the mother, has been found to be significant and have the most positive impact on a mother's support demands during pregnancy and childbirth (Martell, 1990b; Nichols, 1993; Zachariah, 1994). The attachments of mother-daughter and husband-wife were found to be significant predictors of psychological well-being and positive social support perceptions in a study done by Zachariah (1994). This study confirmed previous work on psychological well-being of expectant mothers and their attachment to their own mothers (Lederman, 1984) and to a husband/significant other (Westbrook, 1978).

Chalmers and Meyer (1994) found that companionship for women during pregnancy and their transition to motherhood is important for psychological adjustment. Friends, doctors, other family and childbirth educators were found to be good

providers of support, but not as excellent as a husband or mother (Chalmers & Meyer, 1994). While there is no research that has specifically examined loss in support resource in any of these support providers and the impact on the mother's well-being, implications of the Chalmers and Meyer's study make it plausible to consider emotional dependence on a partner or parent to have higher significance in a mother's well-being; with loss of that support having a greater impact upon the mother.

It is the mother's perception of who is included and excluded from the boundaries she establishes for her support system. According to Boss (1988), this is key to a person's management of stress and coping with a given situation. When lack of control, regarding these boundaries, ensues during the mother's vulnerable period ("taking-in", Rubin, 1984) after birth, there is an interplay between all of these psychosocial parameters. If the relationship with the person who is identified as no longer available or part of the support system is perceived by the mother as strong, the deficit in the network may be operationalized by the mother as hopelessness and helplessness.

For purposes of this study, the social support network was defined as two or more people, one of which was a partner or parent, who were important to the mother (May, 1992), related to her through giving and receiving support (Kahn & Antonucci, 1981), and identified their membership by

a sense of interconnectedness and belongingness (Polomeno, 1996), based on relational intimacy and dependency. The person or persons providing support to the mother was considered important and significant in her perception, and necessary to her network.

Loss in the Social Support Network

It was loss of a network member upon which this study was focused. Loss in the network was defined within the mother's perception and the value or importance of the support resource the lost member represented to her. The social support resource the person provided to the mother represented the valuation the mother placed on the person in her network that was lost to her. Loss of the network member during the pregnancy or immediate postpartum period could be due to moving, a job change, divorce or separation, death or some other reason (Norbeck & Tilden, 1983).

Postpartum Depressive Symptoms

Depressive Symptoms

Recognition of depression is based on symptoms. Dejection, sadness, hopelessness, loss of interest in pleasurable activities, fatigue, indecisiveness and sleep disturbances (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961; DSM-IV, 1994) are just a few of the descriptors used when characterizing depression. Symptomatology or change from normal function may be identified as a singular descriptor or a cluster of signs or indications deviating from normal.

The gravity of an episode of depression grows proportionally with the duration and number of symptoms manifested.

Because depressive symptoms are manifestations of physiological and psychological difficulties experienced by an individual, they are globally attributed to many types of depression and help define depressive states. The commonalities among all types of depression and their symptomatology will better be explained by an examination of clinical depression. An understanding of the criteria with which clinical depression is diagnosed will aid in the understanding of postpartum depressive symptoms in this study.

Clinical Depression

Depression is one of the most common and distressing human experiences. Depression does not discriminate. Social class, age, gender and ethnicity have little to do with those afflicted. According to the DSM-IV (1994), symptoms of depression cause clinically significant distress or impairment in social, occupational or other areas of functioning and are not due to a physiological effect, i.e., drug use, a medical condition, or bereavement. For a diagnosis of depression, five or more of the symptoms must be present during the same two week period, and signify a change from previous functioning. Within the diagnosis, one of the symptoms present must either be depressed mood, or loss of interest or pleasure (from DSM-IV, 1994).

The diagnosis of clinical depression, as defined in the DMS-IV criteria, is based on the following, and experienced nearly every day:

1. depressed mood most of the day.
2. markedly diminished interest or pleasure in activities of daily living.
3. significant weight loss (not dieting) or gain, manifested in decrease or increase of appetite.
4. insomnia or hypersomnia.
5. psychomotor agitation or retardation.
6. fatigue or loss of energy.
7. feelings of worthlessness or excessive or inappropriate guilt, not merely self-reproach.
8. diminished ability to think or concentrate, or indecisiveness.
9. recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan or a suicide attempt or specific plan (p. 327).

Measurements of Depressive Symptomatology

Many authors have measured aspects of depression and its symptomatology. Beck et al. (1961) designed an instrument, the Beck Depression Inventory (BDI) to establish the existence and severity of depression, focusing on cognitive and affective dimensions. Symptoms and attitudes measured include: sadness, pessimism/discouragement, sense

of failure, guilt, expectation of punishment, self-dislike, self-accusation, suicidal ideation, crying, social withdrawal, indecisiveness, body image distortion, work retardation, insomnia, fatigability, anorexia, weight loss, somatic preoccupation and loss of libido.

Radloff (1977) designed the Center for Epidemiologic Depression Scale (CES-D) to measure cognitive, affective and behavioral symptoms and the frequency of occurrence. The scale is a measurement of the following components: depressed mood/affect, feelings of guilt and worthlessness, somatization, retarded activity, loss of appetite, interpersonal measures, and sleep disturbance. These scales which are two of the more frequently utilized instruments, were developed for measurement of depression in the general population.

The CES-D and BDI provide the researcher with a comprehensive picture of the symptomatology with risk for depression. Although the descriptor wording is not exact between the two instruments, general topics of: affect, behavior, and cognition are addressed and measurable, producing like symptom recognition.

The Edinburgh Postnatal Depression Scale (EPDS) designed by Cox, Holden, and Sagovsky (1987) is used to detect depression in the postpartum period. The instrument measures feelings of being panicky or worried, lack of humor, sleep disorders, feelings of being miserable, guilt,

and self harm. This instrument (EPDS) appears to lack the comprehensiveness that the generalized instruments possess.

Recurrent themes noted in the three instruments, which are representative of the authors' concepts of depression are, sleep disturbance, guilt, worry/anxiety and suicidal ideation. With this interrelating symptomatology, coupled with the time interval of "within the last week" common to all three instruments, a case can be made that symptomatology as delineated by each instrument can define risk for multiple types of depressive states, i.e., postpartum depression, clinical depression, within a constellation of symptoms. However, these instruments are used as guides for the clinician in providing a measure of number and frequency of symptoms, and indicating need for further evaluation.

Characteristics of Postpartum Depressive Symptomatology

Historically, awareness of emotional problems following childbirth has been found to be recorded as early as the fourth century BC by Hippocrates (Nalepka & Coblentz, 1995). One of the most profound, yet unexplainable phenomenon for some women in the postpartum is that of depression. It robs those so distressed of the joy and happiness a new baby brings to a mother.

With signs of clinical depression and disorders of depression in the postpartum period having few differentiating characteristics, timing of depressive

episode and circumstances surrounding the episode, i.e., delivery of a newborn, are the basic distinguishing characteristics used to differentiate between depressive incidents. The DSM IV (1994) recognizes Depression with a Postpartum Onset differing only in fluctuation of course and mood lability from those depressive episodes not associated with childbearing. Guilt is another distinguishing factor attributed to depression in the postpartum period (Beck, 1992). Many mothers feel guilt with regard to depressive feelings during the time when happiness is the expectation. Because of this factor, these mothers are reluctant to openly discuss their feelings, and treatment is postponed or never received, potentially escalating the intensity of the depression and possibly the duration.

One of the most likely times for a woman to present with depressive symptomatology is during the childbearing years. Events such as menstruation, childbirth, illness or death of a loved one are factors that may precipitate depressive symptoms (Pariser, 1993).

The term "postpartum depression" is often used to describe three distinctive types of postpartum depression (PPD) which vary greatly in severity and duration, and with boundaries between them not always clear.

The first is a transient depression and the mildest form, known as "baby blues". It ordinarily occurs in the first days of postpartum, and lasts a few days to a few

weeks and affects 50 to 80% of new mothers (Cox, 1989). It is characterized by tearfulness for no apparent reason, anxiety, restlessness, irritability, oversensitivity and mood swings. Possible causes for this depressive symptomatology are lack of sleep, major life changes, sudden drop in progesterone and estrogen, increase in demands the mother faces, and readjustment psychologically of usual and consistent routines.

A second type of PPD, postpartum psychosis, the most severe type, occurs in 0.5-2 per thousand women who may experience delusions, hallucinations and impaired concepts of reality. The woman may or may not have had chronic depression in the past. Symptoms generally begin about three days after childbirth and include fatigue, tearfulness and mood lability, much like the milder disorders. Confusion, agitation, disorientation, suspicion and obsessive concern about the baby begin soon after the mother is discharged. Incidence is independent of social, cultural, nutritional and medical factors (Kumar, 1990). Hospitalization, medication and therapy are usually the regimen for those with this type of depression. It may last a few months to years.

The third type of depression is Postpartum Depression (PPD) which generally refers to the onset of depressive symptoms experienced in the period immediately after childbirth. This condition, which may develop any time in

the year after the birth of a child, occurs in 4 to 15% of new mothers. The usual time frame for onset is within the first six weeks postpartum, and may last for more than a year (Driscoll, 1990). Atypical anxiety, fatigue, and phobias are prominent, as are the typical depressive symptoms of low mood, lack of interest or pleasure, guilt, lack of appetite, and sleep disturbance.

Recovery from PPD is usually within a year's time, although some mothers may continue to display symptoms such as irritability, fatigue, depression, or disinterest in activities. Recurrence risk has been reported to be 30 to 50% (Knops, 1993).

In a qualitative study of Postpartum Depression (PPD), Beck (1992) interviewed seven women who had suffered from PPD and found the themes of: unbearable loneliness, loss of previous interests and goals, inability to concentrate or make decisions, uncontrollable anxiety attacks, insecurity, suicidal ideation, and obsessive guilt. These women found their lives compromised by this phenomenon to the extent they were unable to function in their previous capacity. These findings reflected those of Radloff's (1977), when designing the CES-D.

The clinical signs and symptoms of postpartum depression are comparable to non-postpartum depression such as feelings of inadequacy, anxiety, despair, lack of energy, loss of interest in sexual activities and compulsive

thoughts. The content of the mother's depressive thoughts, however, are concentrated on her sense of inability to love or to love adequately, and on her ambivalence towards the infant (Chalmers & Chalmers, 1986).

Depressive symptomatology following childbirth may manifest in various forms. The recurrent themes and risk factors found in the literature and that of the DSM IV appear to be lack of control, labile hormonal changes, role change and acceptance, anxiety, loss of interest in activities or pleasures, fatigue, guilt, inability to make decisions, decreased self-worth, and despondency.

For purposes of this study, postpartum depressive symptomatology was defined as a cluster of symptoms based on loss in various areas of physical, psychological and social functioning (Beck, 1993; Chalmers & Chalmers, 1986; DSM-IV, 1994), and which are present at varying intensities during a week. Presence of these symptoms may be indicative of need for further investigation for clinical or postpartum depression if frequent or severe enough. These symptoms are: irritability, crying spells, depressed mood, feelings of guilt and worthlessness, feelings of fear, helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep and attention disturbance (Radloff, 1977).

Conceptual Framework

Roy's (1984) Theory of the Person as an Adaptative

System was selected as the framework to guide in the explanation of the relation between the variables of loss within the social support network, and depressive symptomatology in the postpartum period. The mother's role, the stressor of loss, her relationship to the internal and external environment, and adaptation is described within the study model.

The essence of the Roy (1984) model is based on the adaptive behaviors of a person adjusting to environmental stressors, both internal and external. Environment is all conditions, circumstances and influences surrounding and affecting the development and behavior of a person. Adaptation is a positive response to internal or external stimuli using bio-psycho-social and spiritual mechanisms to promote personal integrity. A person's ability to respond positively or adapt is based on the degree or extent of change experienced and the ability of the person coping with the change (Roy).

A person's adaptation level or ability to cope is determined by the effect of three classes of environmental stimuli: focal, contextual, and residual. Focal stimuli is the degree of change immediately confronting the person, in simpler terms, the environmental change to which the person must adapt (Roy, 1984). In terms of this study (See Figure 1), the focal stimuli is loss in the support network, represented by the rectangle on the left of the model,

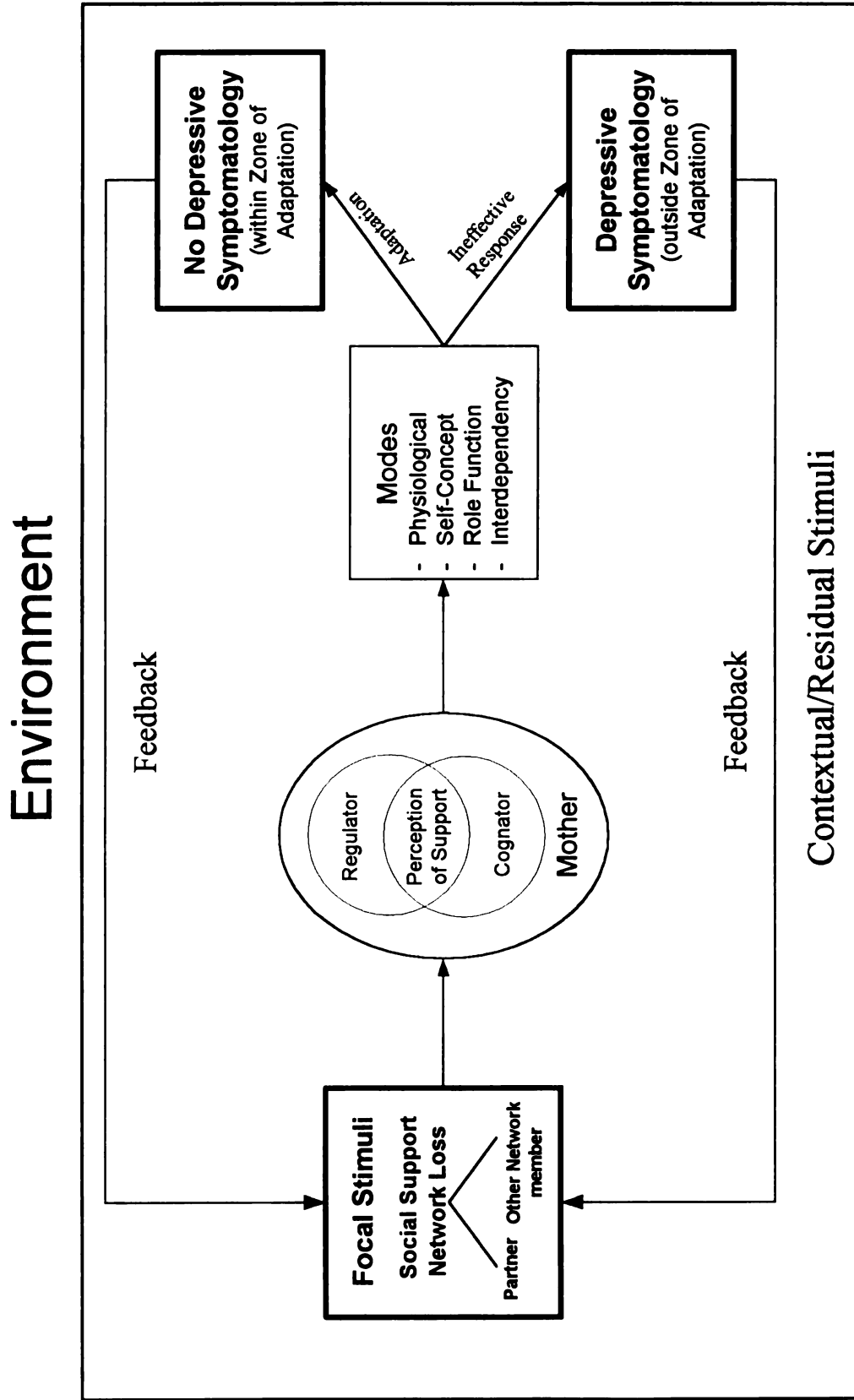


Figure 1. Adaptation of Roy's Theory of Person as an Adaptive system showing the relationship between the loss of a significant member in a mother's Social Support Network and depressive symptomatology.

compounded by the role change demands of pregnancy and new motherhood within the mother's environment. Contextual stimuli are all other environmental stimuli present that influence the mother's adaptive response. The contextual stimuli are represented in the model by the large, surrounding rectangle and contain the support network, the memberships' tangible and emotional support, and the changes evolving from the pregnancy with respect to role, body image, responsibility and relationships. The residual stimuli are those beliefs, attitudes, traits and experiences that have an effect on the situation, as something previously learned that affects current response to focal stimuli; the mother's perception of support provided by each member rather than the actual behaviors, previous experiences with loss, and significance of the lost member. Residual stimuli are represented within the mother's environment. These stimuli are bits of information or inputs and are considered stressors, provoking the adaptive mechanisms of the mother to function (Roy, 1984). The mother is represented by the central oval of the model and contained within are her perceptions of support.

Constant change and adaptation transpire during pregnancy for all women. This is the environment the model represents. There are physiological and emotional changes happening from the moment the pregnancy is recognized (Rubin, 1984). According to the Theory of Adaptation (Roy,

1984), the impact of these changes may be modified by the effect of the social support given by the members of the support network (contextual stimuli) only if the mother recognizes the support by means of residual stimuli (Roy). Even if the behaviors of others indicate the presence of support, if the mother does not perceive support to be available, it cannot be used. Adaptation occurs only when the total stimuli (focal, contextual and residual) affecting the person fall within the zone of adaptation or the limits of the person's adaptive capacity (Galbreath, 1990).

Within Roy's framework, the mother is an adaptive holistic system having a set of inputs, control and feedback processes and outputs, represented by the feedback loop. In other words, a living adaptive system in constant dynamic interaction with the environment, maintaining the integrity of one's being by adapting to internal and external changes. The adaptive system of the mother has input coming from the external environment (social support) as well as input from within, which are her perceptions (residual stimuli). It is these units of information, matter, or energy from the environment or from within that elicits a response, either adaptation or ineffective to the stressor (loss). The level of stimuli and the mother's level of adaptation act as the boundaries from which she is able to respond or output behaviors. Behaviors can be internal or external. Adaptive behaviors are those responses that promote integrity of the

person. Ineffective responses promote maladaptive behavior and do not promote integrity (depressive symptomatology).

Each person's adaptation level is constantly changing through an internal and external feedback loop and is influenced by the coping mechanisms of that person (Roy, 1984). The adaptation level represents the range of stimuli that the person can tolerate and maintain an adaptive response. The coping mechanisms that are used by the person to achieve adaptation to stimuli are the regulator and the cognator, represented within the central oval by two overlapping circles. Within the overlapping circles lies the mother's perceptions of support.

The regulator and cognator are subsystems of the person, and working through the four adaptive bio-psycho-social modes, they represent the mother's perceptions of any given circumstance. The regulator mechanism is the basic or autonomic response of a person such as a reflex action or an antibody/antigen response or the physiologic responses such as sleep disturbances and change of appetite. The cognator mechanism is related to higher brain functions such as perception, judgement and emotion. It acts consciously by thought and decision, such as the response made to loss in the support network and the importance placed upon that member as a resource.

In maintaining the integrity of the person, the regulator and cognator work together through the adaptive

bio-psycho-social modes, represented in the rectangle to the right of the oval. The physiological, self-concept, role function and interdependency adaptive modes are based on the mother's need for physiological, psychic, and social integrity (Roy, 1984). If integrity is threatened by loss, coping ability decreases.

If regulator and cognator activity is manifested through coping behavior, the adaptation level of the mother is broadened and the range of stimuli to which she is able to respond positively is increased. If the cognator is unable to respond effectively to role expectations of postpartum, due to loss of a specific network member, in other words, "shuts down", the adaptation level may be unexpectedly narrow and preclude role acceptance, or motherhood, itself. Maladaptive behaviors expressed by the mother may be exhibited in terms of depressive symptomatology. Since adaptation is facilitated by the use of both the regulator and cognator coping mechanisms (Roy, 1984), lack of cognator mechanisms could potentially lead to a decrease in regulator ability, i.e., the physical symptoms of depression: sleeplessness, changes in appetite or psychomotor activity, decrease in libido (Beck, 1992; DSM-IV, 1994).

When a specific and valued member of the network is lost to the mother, there is a stimulus or a stressor experienced, represented by the first arrow within the

feedback loop. The support resource may be functional, emotional, or both that the lost member provided (or received) from the mother. If the focal stimuli/stressor of loss in the support network impacts the contextual and residual stimuli of role change and compounds the already unstable and changing environment in which the mother must function due to her perception of new roles and relationships (residual stimuli), the mother's adaptation level or coping mechanism may be inadequate for the degree of change the mother is facing. Thus, the adaptation level narrows and the level of stimuli that is tolerated decreases due to the loss of the member, significance placed on the member, and the loss of contextual stimuli provided by that member. Loss of a husband or partner, or some other member of the support network at this time, if perceived (residual stimuli) by the mother as a significant and valued support resource, may decrease coping and narrow the zone of adaptation beyond the mother's ability to adapt to the stressor. If the resources of the members within the network are unable to provide additional support (contextual stimuli) to maintain the resource level and increase the adaptation level of the mother, there is the potential for an ineffective response due to a stimulus beyond the mother's coping ability and depressive symptomolgy may occur. Inability to adapt to the focal stimulus of the loss may potentially lead to maladaptive behaviors by the mother.

Therefore, when the total stimuli fall outside the mother's zone of adaptation, ineffective behavior or responses occur.

A person's ability to cope varies with the state of the person at different times (feedback loop). The person who has suffered a major trauma (loss of a person providing a close and confiding relationship, i.e., parent, partner, relative, or friend) has a narrowed zone of adaptation. Therefore, loss may subject a mother to greater risk for the ineffective response of depressive symptomatology than those women who have experienced no such loss.

Review of the Literature

In reviewing the current literature on social support and its implications with regard to postpartum depression, depressive symptomatology and risk factors, no research has directly evaluated loss in the support network and its relationship to risk of depressive symptomatology.

Functional support has been the focus of the majority of the studies looking at the connection between support networks and risk of depression (Collins et al., 1993; Logsdon et al., 1994; Norbeck & Anderson, 1989; Norbeck et al., 1981; Turner et al., 1990).

In the current literature, it was found that no single causative factor can be determined to contribute to the problem of depression in the postpartum period. Studies defining the etiology of postpartum depression cite biological, psychological and sociological factors during

pregnancy and delivery as possible determinants (Adcock, 1993; Arizmendi & Affonso, 1984; Chen, 1995; Mills, Finchilescu, & Lea, 1995; Thurtle, 1995). There have been a number of studies done on the subject of prenatal factors that are considered predictors of depressive symptomatology in the postpartum (Affonso et al., 1991; Affonso, 1987; Mercer & Ferketich, 1988; Tilden, 1983), on adaptation to postpartum stressors (Affonso, 1987) and on treatment regimens (Clement, 1995; Gerrard, Holden, Elliot, McKenzie, McKenzie, & Cox, 1993; Jermain, 1992; Nalepka & Coblentz, 1995; Vines & Williams-Burgess, 1994).

In a study done by McIntosh (1993), there was found to be a significant association between symptoms of depression and the amount of support obtained from a partner. Marital difficulties have been significantly associated with depression in postpartum (Watson, Elliot, Rugg, & Brough, 1984) and perceived emotional support that has deteriorated in a marital relationship. Loss of the support, and feeling unloved by a partner was found to have a highly significant correlation with postpartum depression (Arizmendi & Affonso, 1984; Boyer, 1990). Distress experienced during the pregnancy from inadequate support, affection and security through loss or perceived loss of a member of the network, has been posited to potentially evolve into negative feelings regarding self and fulfillment of the maternal role (Cronenwett, 1985). Cronenwett found the social support

network providing support resources for the mother to be a strong predictor of parental role satisfaction and positive psychological effects on pregnancy outcome.

In a meta-analysis of predictors of PPD, Beck (1996) analyzed 44 studies addressing predictors of postpartum depression and the magnitude of their relationship as predictors. These predictors focus primarily on determinant identification in the prenatal period. Prenatal social support was shown to have a moderate effect as a predictor of PPD.

In a study by Polomeno (1996), social support was found to influence individuals to adhere to healthy routines. It was also found to mitigate the effects of stress as it moderates the impact, and facilitates the individual's coping. Social support has been found to assist in the appraisal of potentially threatening situations or problems, and could, through its buffering affect, prevent a person from going into crisis.

Affonso et al. (1991) completed a prospective study analyzing the predictive value of four factors: marital relationship, stress, social support and cognitive influences as predictors of depressive symptomatology in postpartum. In this study, these psychosocial factors, were found to be predictive of severity of depressive symptoms in both pregnancy and postpartum. Mercer and Ferketich (1988) also found a significant relationship between social support

and stress as predictors of depression during pregnancy. Other studies have found a significant relationship between social support and postpartum depression (Collins et al., 1993; Logsdon et al., 1994). These studies corroborated previous research by O'Hara (1986) and O'Hara et al. (1984) that a variety of prenatal factors contribute to the manifestation of depression in postpartum. Seguin, Potvin, St.Denis and Loiselle (1995) state there is a direct link between social support and mental health because the unavailability of social support when needed is strongly associated with the depressive symptomatology of pregnant women. Hall, Gurley, Sachs and Kryscio (1991) have associated higher depressive symptoms with fewer social support resources. Logsdon et al. (1994) have found that failure to receive anticipated support resources may lead to negative consequences or depressive risk factors in the postpartum period.

Supportive relationships have been found to enhance feelings of well being and personal control (Norbeck & Anderson, 1989). Other studies corroborated that poorer marital relationships and less social support from family and friends led to increased depressive symptomatology in pregnancy (O'Hara, 1986; Robinson, Olmstead, & Garner, 1989; Whiffen, 1988).

Zachariah (1994) has attributed the importance women place on partners and their own mothers in positive birth

experiences and role acceptance of motherhood. Yet, specific composition of networks and membership significance within the network (Tarkka & Paunonen, 1996) have been poorly represented in the literature.

Studies measuring the incidence and degree of depression are prevalent in the literature (Barnet, Joffe, Duggan, Wilson, & Repke, 1996; Gotlib, Whiffen, Mount, Milne, & Cordy, 1989; Saks, Frank, Lowe, Berman, Naftolin, & Cohen, 1985; Zelkowitz & Milet, 1995; Ugarriza, 1995; Viinamaki, Rastas, Tukeya, Kuha, Niskanen & Saarikoski, 1994) and have identified that up to 75% of postpartum women will be affected by one of three types of postpartum depression: blues, psychosis, or non psychotic depression. Studies developing screening instruments to help determine mothers with depressive symptomatology and potential for depression are becoming more prevalent (Affonso, Lovett, Paul, & Sheptak, 1990; Beck, 1995; Ugarriza, 1995).

Many studies have attempted to explain the vulnerability women experience to depression during the period following childbirth. It has been universally accepted in both the medical/clinical and the social science arenas that depression in the postpartum is a very real problem with unknown etiology. The response to physiological and/or social-psychological changes associated with pregnancy and birth have been cited as reasons, in attempts to explain the phenomenon of the range of emotional

reactions, generally characterized as depressive, in the postpartum period (Frate, Cowen, Rutledge, & Glasser, 1979; Hayworth et al., 1980; Unterman, Posner, & Williams, 1990).

Loss was identified by Driscoll (1990) as a recurrent theme in postpartum depressive symptomatology, with the mother experiencing loss in relationships, self-esteem, energy and life-style. Driscoll implies that once loss is recognized by the mother, she will experience a grieving process which will then allow coping mechanisms to begin and she will initiate the process of acceptance of the new postpartum role.

With this in mind, determination of factors placing prenatal and postpartum women at risk for depression, and appropriate steps in resolution of these risk factors should be further studied. Corroboration of existing literature and exploration of other potentially predictive factors have as yet just touched the surface of this problem.

Critique of the Literature

It is apparent that the concept of loss in the network with regard to source of support and pregnancy is a needed area of research and a limiting factor in the literature concerning PPD. However, the concept of social support and social support network has been well documented in the current literature. Even so, social support is quantified as support given and structure of support ties (Affonso & Domino, 1984; Cronenwett, 1985; Gjeringen & Chaloner, 1994;

O'Hara, 1986) and not in loss of support. Mercer and Ferketich (1988) measured negative life events during pregnancy as predictors of depression, yet loss of a person in a network was not specifically addressed. This and studies like this one would fill that gap.

Although difficult to quantify, emotional support of the mother during pregnancy must become an evaluation standard, when studying the prenatal and immediate postpartum period. Little research has differentiated the emotional from the functional aspects of support (Cronenwett, 1985; Gjeringen & Chaloner, 1994; O'Hara, 1986).

Depression is a variable that has been well addressed in the literature. Instruments such as the CES-D (Radloff, 1977), the BDI (Beck et al., 1961) and the EPDS (Cox et al., 1985) are widespread in the literature. Emotional impact of depression is prevalent in studies as analyzed by Beck (1996) in the meta-analysis of 44 studies.

Research methodology is limited within the scope of the study variables. It is limited to convenience sampling, subjects with like characteristics, such as low-income or middle class, majority married, majority living together, limited sample size and lack of generalizability (Affonso, et al., 1990; Lantican & Corona, 1992; May, 1992; O'Hara et al., 1984; Seguin et al., 1995). Attrition of the sample subjects have further limited generalizability (McIntosh,

1993). These methodology problems have been repeated in this study.

Because postpartum depression is not limited by socio-economic status, age, health or ethnicity the need to identify risk factors is considerable. There is no textbook profile that characterizes and identifies all mothers at risk, merely predictors. If reliable predictors are established through repeated validative studies, providers will have the ability to focus care during pregnancy so that potential risk can be minimized using anticipatory guidance and encouraging development of an effective support system. There is a need for further research recognizing and validating reliable predictors for risk of depression, and the establishment of screening standards for improved prevention.

Studies addressing loss in a mother's social support network from the prenatal period to that period after the birth have not been found in the literature. This study has begun to address the deficiency found in the literature.

Methods

Research Design

This study is a secondary analysis of data collected for a larger primary study entitled, "Factors Influencing Pregnancy Outcome at the Center For Healthy Beginnings, Jackson, Michigan" by Schiffman and Omar (1994). The original study examined factors influencing adequacy of

prenatal care and pregnancy outcome in the low income women served by a private, not-for-profit center. Subjects were enrolled and data collected between May, 1992 and May, 1993. This secondary analysis uses a non-experimental design to examine the data pertaining to the association between loss in the social support network and depressive symptomatology in the postpartum period of low income women. The primary study, an evaluative study, included prospective survey instruments the participants were asked to complete on the first prenatal visit and one of the next two, and the postpartum visit. A chart review was done on the initial prenatal visit and after subjects attended their postpartum visit.

Sample

A non-probability convenience sample of 33 women from the primary study, reporting at least two persons in their support network, and who completed the Norbeck Social Support Questionnaire (NSSQ), and the Center for Epidemiologic Studies Depression Scale (CES-D) were selected. The instruments were completed at the prenatal and postpartum data collection points.

The primary sample was composed of 132 women, with an average age of 23.4 years ($SD = 5.58$), living in Jackson county seeking prenatal care during May 1992 through May 1993. The majority were single, multiparous and of the caucasian race, and had a high school diploma or GED.

Almost 94% of the primary sample had either Medicaid or a Medicaid pending insurance status.

Table 1

Frequency and Percent of Demographic Characteristics of Sample ($n = 33$)

<u>Characteristics</u>	<u>n</u>	<u>%</u>
Maternal Age		
10-19	10	30.2
20-29	17	52.3
30 and above	6	17.5
Educational Level		
<High school	1	1.6
Some high school	6	19.7
H. S. diploma/GED	19	57.4
Some college	6	17.5
Associate degree	1	3.2
Marital Status		
Single	11	33.3
Married/Cohabiting	12	34.9
Separated/Divorced	10	31.7
Number of Deliveries		
0	13	39.7
1	4	12.7
2	7	20.6
3	6	15.9
4 or greater	3	10.5
Race		
Caucasian	28	84.1
African American	4	12.7
Hispanic	1	3.2
Insurance		
Medicaid	23	68.3
Medicaid pending	8	25.4
Blue Cross	1	3.2
Cash	1	3.2

In this study's sample (see Table 1), the majority of women were single and caucasian with the mean age of 22.7 years ($SD = 4.47$). Few women had education beyond high school, and most had at least one prior pregnancy. In this study sample, 91.7% were insured by or enrolling in Medicaid insurance.

Operational Definitions

The variables of this study were social support network, loss in the social support network, and depressive symptomatology in the postpartum period.

Social Support Network

The social support network is defined by the categories listed by the respondent on the second column of the first page of the Norbeck Social Support Questionnaire, headed, "Relationship". Nine categories were used to help respondents identify support resource members in the NSSQ (Appendix D, page 1): spouse or partner; family or relatives; friends; work or school associates; neighbors; health care providers; counselor or therapist; minister/priest/rabbi, and other.

Loss in the Social Support Network

Loss in the social support network was measured in part by the Norbeck Social Support Questionnaire, in the prenatal and postnatal period. Twenty three subjects identified at least one loss in the membership from completing the prenatal NSSQ to completing the NSSQ at the 6 week

postpartum visit with no subjects reporting an increase in members of their support network.

The components of measurement were, the relationship or source of social support composing the social support network as identified by the subjects on page one of the NSSQ (Appendix D); the identification of loss of at least one member of the support network, and the relationship of that member to the mother identified on page six of the instrument (Appendix E).

Comparison of the prenatal network membership to the postpartum membership enabled grouping of the lost members. Three groups were formed. If the loss was of a spouse, partner or boyfriend, the respondent was identified in one group. The loss of any other network member was identified in the second group. If the respondent experienced no loss in support membership during the pregnancy or during the six weeks postpartum, she was placed in the third group.

Postpartum Depressive Symptomatology

Depressive symptomatology was measured by the Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977) (Appendix F). The CES-D, a 20 item instrument with a response scale of zero to three for each statement measures frequency or duration of each item experienced during the past week. To score a zero, the respondent would experience the statement once during the past seven days. A response of three indicated the statement was experienced five to

seven days during the past week. The possible score range was 0 to 60 with higher scores indicating more depressive symptoms. A score of 16 has been used by Radloff (1977), and Barnes and Prosen (1984) to indicate need for assessment of clinical depression. Four items (Items 4, 8, 11, 16) were reversed scored to control for socially acceptable responses. For purposes of this study, the prenatal administration of the CES-D was used as the covariate and the scores from the postpartum administration were used as indication of risk for depression.

After reverse scoring of the four positive affect items, to control for bias in the response, a mean score was obtained and multiplied by 20 (the number of items on the instrument) to arrive at the CES-D score for both the prenatal and postnatal administration. Determination of levels of depressive symptoms were ascertained from the scores (Radloff, 1977).

Instruments

Norbeck Social Support Questionnaire (NSSQ).

The NSSQ by Norbeck, Lindsey, and Carrieri (1981) is a self-administered questionnaire measuring multiple dimensions of social support. Total functional support, total network, and total loss are the three main variables measured by the instrument and were based on Kahn's (1979) conceptual definition of social support and Barnes' (1972) definitions from network theory. The main variables are

divided into subscales with functional components being measured by the number, duration and frequency of contact of relationships in the network, and the last component measuring loss of members and support in the network.

Multiple dimensions of social support are measured by the NSSQ. Test-retest reliability of network property items was reported to be between .85 and .92 within a one week interval, with Cronbach's alpha reported to be .88. In the retest, 90 percent of participants answered the recent loss question in the same way they had originally. Kendall's Tau B correlation coefficients for test-retest scores on the number of categories of persons lost was .83 and for the amount of support lost, .71 (Norbeck et al., 1981). Later testing by Norbeck, Lindsey, and Carrieri (1983), showed a moderately high level of test-retest reliability over a seven month interval with a range of .58 to .78. Internal consistency of the instrument was tested through intercorrelations among all items and showed no significant relationships between loss items and any of the function or network property items. Correlations among the loss items ranged from .54 to .68 (Norbeck et al., 1981).

Concurrent validity was tested by concurrent administration of a known valid measure of social support, the Social Support Questionnaire, developed by Cohen and Lazarus (1975) in the first testing. The two instruments define their component subscales differently, but have rough

parallels between variables. A negative relationship ($-.44$) was found between total loss and tangible support.

Emotional support was moderately related to each functional subscale and to the functional and network variables, but not to total loss (Norbeck et al., 1981).

Center for Epidemiologic Studies Depression Scale (CES-D).

Depressive symptomatology prenatally and postnatally was measured by the CES-D (Radloff, 1977), a 20 item self-report scale to assess the frequency and duration of distress and depressive symptomatology within the general, non-psychiatric population (Appendix F). The CES-D provides an index of cognitive, affective, and behavioral depressive features as well as frequency of symptoms. Depressive symptomatology is assessed by means of 16 items, based on: depressed mood, the feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbance. Four other items assess positive response. The scale was designed to measure states of depression and any changes in these states by assessing the frequency of symptoms in the week prior to administration. Scoring is done on a Likert scale.

The internal consistency reliability coefficients have been reported to be .95 or above (Barnes & Prosen, 1984; Hall et al., 1991; Jones-Webb & Snowden, 1993; Radloff, 1977; Radloff & Locke, 1986; Roberts, Andrews, Lewinsohn, &

Hops, 1990) across varying age, sex, and racial groups. The Cronbach's alpha coefficients for the primary study were .87 at the prenatal administration and .92 at the postpartum administration (Schiffman & Omar, 1994). Test-retest reliability correlations ranged from .41 at a 12 month interval to .67 at a four month interval (Radloff, 1977). Validity of the instrument has been tested with known groups and has been found to differentiate between diagnosed depressed and non depressed subgroups (Ensel, 1986; Husaini, Neff, Harrington, Hughes, & Stone, 1980; Radloff & Locke, 1986; Weissman, Sholomskas, Pottenger, Prisoﬀ, & Locke, 1977). In the primary study, three items that may have been influenced by changes of pregnancy rather than depression, poor appetite, effort, and sleep, did not demonstrate a different pattern of response than the other items (Schiffman & Omar, 1994).

Data Collection Procedure

This study is a secondary analysis of data taken from the research of Schiffman and Omar (1994). Details regarding the original data collection procedure are contained in Appendix A of this study. Information from the questionnaires provided by the sample was gathered by the original investigators and entered into a computer database. Data were provided on disk for this study.

Data Analysis

Data analysis was done using the SPSS 6.0 statistical

analysis computer software program. Frequencies, percentages, means, and standard deviations, as appropriate, were used to describe each variable within each group and demographics of age, parity, race, educational level and insurance type of the sample.

The research question was answered through the use of analysis of covariance (ANCOVA) to test mean differences on the postpartum CES-D scores of depressive symptoms between three groups: loss of husband or partner; loss of other network membership including family members; and no loss. Scores on the prenatal CES-D were used as the covariate.

Protection of Human Subjects

The primary study by Schiffman and Omar (1994) was approved by the University Committee on Research Involving Human Subjects (UCRIHS) (Appendix C). This study was also approved by UCRIHS (Appendix B). The data obtained for this secondary analysis were given to this researcher with no name identifiers. Case numbers were the only association to the data.

Assumptions and Limitations

An assumption of the primary study was that all participants could read, understand the questions in the instruments, and follow the instructions given. It was also assumed that the respondents answered the questions honestly without any influence from outside sources, and that the

data for the primary study were entered accurately and consistently.

Limitations of the study may be attitude and emotional state at the time of participation. The influence of recent negative life events i.e., an argument or frustration could potentially change perceptions of support at the time of test response.

Further limitations were also recognized regarding decreased generalizability with respect to the limited and homogeneous convenience sampling. Attrition and size of sample was also of concern in this study due to loss of respondents from initial to follow up administration of instruments. Sufficient respondents meeting inclusion criteria of loss in the network was a concern and also limits generalizability. Ability to measure relevance and impact of addition to the network was another limiting factor that has gone unaddressed in this study.

Type and significance of the loss experienced by the mother, as reported in the NSSQ, was recognized by this researcher as a limitation due to the lack of specificity of the instrument in differentiating type of loss experienced, i.e., a death, a relocation, etc. Factors and levels of grief due to a death rather than other types of losses may have a greater impact on data in terms of depressive symptomatology expressed. In cases of loss, timing factors may affect data reported for the sample, with those having

experienced a loss closer to data collection reporting greater symptomatology by nature of the timeline of the event. Due to the nature of secondary analysis and the use of a pre-existing data set, limitations regarding instruments of measurement for variable/concept determination are dependent upon those used in the primary study. Therefore the focus of the variables examined was not specific to this study's research question. Lack of comparative studies have further limited validation of the resulting data of this study.

Results

Analysis of the Research Question

Of the 33 subjects who could be placed in the three loss categories, there were 11 experiencing loss of a husband, significant other or boyfriend, 12 experiencing loss of any other member of their social support network, and 10 experiencing no loss during the pregnancy or during the weeks prior to the postpartum visit. Mean depression scores were all grouped about the suggested cut score of 16 and were all in the low or slightly above low range (Zuckerman, Hortensia, Bauchner, & Cabral, 1989). There were no significant differences in mean depression scores between the groups, $F(2, 30) = .325$, MSE 2.04. The groups with loss had similarly low depression scores and were comparable to the group without reported loss. However, the standard deviations within the groups

Table 2

Means and Standard Deviations for Depression Score of the Three Loss Groups

<u>Loss</u>	<u>n</u>	<u>Mean</u>	<u>SD</u>
Partner/spouse	11	21.13	10.00
Other SS Member	12	21.08	13.65
No loss	10	17.44	11.80

was large, showing a great variability within the three groups and little variability between them, demonstrating they were more alike than different, despite the loss component.

Discussion

Overall, the results of this study failed to support loss in the social support network of a mother, regardless of the source of the loss, and an association with symptomatology of depression in the postpartum period. The small homogeneous sample size and loss experienced by 23 of the 33 women in the sample could account for the lack of significance in the findings. The sample may have had a unique commonality, different from the other respondents in the original sample. This variable or variables may have been undetectable to the original researchers and thus, unmeasurable with regard to this study.

The mean depression scores of 17.44, 21.08, and 21.13 with the large standard deviations (10.00 to 13.65) indicate

that some women in each group reported high end depression scores of above 30 on the CES-D. These scores were found by Radloff (1977) and Barnes and Prosen (1984) to be at high risk for depression and well above the cut score of 16. All groups were similar in showing results at high risk for depression and no risk. A comparison can be made of the percent of high risk respondents to the 4 to 15 % of new mothers experiencing PPD in the current literature (Driscoll, 1990).

Other limitations when considering this nonsignificant outcome are lack of specificity in type of loss. That is, whether the loss was of a death, or a physical move to a different geographic area which made the support member less or non accessible. The timing of the loss or the distance of the relationship within the network may have contributed to resolution of loss before reporting on the postpartum instruments.

The NSSQ instrument used by respondents to report loss lacked a method of identifying negative support received. If the mother lost a provider of negative social support, respondents may not have been affected by the loss, or viewed it as a positive change. These factors were unmeasurable.

Another consideration relating to loss posits that the mother's social support network could offer enough support to sustain the mother through her period of grieving the

loss, and provide an increased support resource. Loss and normal grief, if handled with sensitivity and support by family and friends may increase the mother's ability to adapt even more so than those mothers experiencing no loss. The compounding of loss with the stress of role adaptation and the additional workload of motherhood could provide the stimulus needed for others in the support network to remain in contact, offering aid, affirmation, and affect for the new mother long after they would normally have offered this support. The loss experienced, might be the motivator that enabled the mother, through the additional support received, to overcome depressive risk factors.

Implications

Conceptual Framework

There was no relationship identified to support the model. For this study, however, changes within the model would not impact the results. For future studies, changes of the model may enable increased interpretation and application of the variables.

With the focal stressor of loss, the remaining membership of the mother's support network may take on the additional resource allocation responsibility, improving the contextual stimuli for the mother. With the changes that pregnancy and new motherhood bring, loss during the pregnancy or immediately after, may be placed in the contextual stimuli rather than the focal representation,

making changes of motherhood the focus. This may begin to address the similar low scores on the CES-D.

The second change to the model, that of the role change and adaptation the mother experienced during pregnancy and after the birth, could be moved within the model to become part of the focal stimuli and potentially affect the mother's response to a loss. At this time the role of motherhood may supersede the loss' impact.

Placing perception of support (residual stimuli) within the two groups: partner and other network members may capture the mother's initial feelings about the network members. This would allow recognition of a positive loss or negative loss for the mother. This placement of perceptions of the membership would give the researcher insight into the mother's valuation of the support received from the other support network members. The valuation of the support given may help to determine meaning of the loss to the mother.

The support network, by increasing their availability and time spent with the new mother during a loss, take on many of the new tasks of motherhood with regard to infant care and increased workload. This diminishes the impact of the new tasks required of the mother by additional support resource, and may decrease additional stressors by increasing the mother's zone of adaptation. Network members' physical availability during times of grief, their opportunity to address issues immediately, both with

emotional support and physical touch/presence could improve the grief response of the mother and improve her adaptation reaction. A variable not addressed in this study was that of the zone of adaptation for each mother in the sample, that is, whether the mother was appropriately within her zone of adaptation before her loss or no loss.

Existing Literature

There have been no studies addressing loss of membership in a social support network and risk for symptomatology of postpartum depression. Rather, the literature has focused on the loss of the social support function and has not attributed this function to the loss of a person providing it (Collins et al., 1993; Logsdon et al., 1994; Norbeck & Anderson, 1989). Further, the literature does not attribute levels of depression to this loss. Therefore, it is the loss of a person significant to the mother, the support resource this person provides, and the impact (level of depression) this loss specifically has on the mother's adaptation or risk of depressive symptomatology which is missing from the literature. This study attempts to address that void.

This study has raised questions regarding measurement of loss, relationship, valuation, and the attention that must be paid to outliers in the data. In the current study, a third of the sample lost a partner, a third lost another network member, and a third experienced no loss. Each group

had a similar mean depression score and all groups had a wide standard deviation range. No other study has been so equally divided in the current literature. Since the sample of 33 women was taken from the original sample of 132, there is also a question of how representative of the original sample the current was. The large standard deviation in all groups, when added or subtracted to the mean gave results showing a very high and low risk for depressive symptomatology. Results similar to these, are missing in the literature for comparison. More of this information may have been captured in this study had more respondents come back for their postpartum visit and answered the required instruments, increasing the sample size.

Much of the current literature deals with prenatal factors that hint at loss, but do not directly deal with loss of a member in one's social support network (Affonso et al., 1991; Mercer & Ferketich, 1988; Tilden, 1983). Other studies define social support and reaffirm its import and significance in a good birth outcome (Zuckerman et al., 1989). Other literature validates the positive effects of a mother with good social support (Cronenwett, 1985; Seguin et al., 1995). None, however, validate or speak to loss of a specific member of the mother's social support network.

The importance of further studies such as this, addressing loss of a support person and resource provided, and the risk of depressive symptoms is evident. Further

investigation may provide key information in discovering the impact of loss, social support and depression, as well as provide a more diverse and generalizable sample.

Implications for Advanced Practice and Primary Care

There was no statistically significant association between loss in a mother's social support network and depressive symptomatology in this study. There has, however, been an association between loss and depression in the current literature (Johnson & Apgar, 1997; Schneider, 1984). Implications for advanced practice remain the same as in a pregnancy without loss, that is, a healthy outcome for the family with an increased focus on the mother's support network (Collins et al., 1993; Norbeck & Tilden, 1983).

The APN's interaction during prenatal visits with the pregnant woman should be an avenue to analyze the social support resources of the woman. Evaluation for any loss, acceptance and impact of the loss, acceptance of the pregnancy, previous depressive episodes, and antenatal depression should be addressed at the first visit with questions about changes in life events included at each subsequent visit. As the woman interacts with the APN during prenatal visits, screening for these factors may help in determining if the mother is in an at-risk population. Specific questions about rest, diet, and pleasurable activities in the form of a formal screening tool during the

prenatal and postpartum visits will help the APN to determine any signs of depressive symptomatology, or risk factors for PPD.

Since depression is often precipitated by a loss (Johnson & Apgar, 1997), it is important for the APN to look for signs that are not associated with a normal bereavement period, for those mothers experiencing the loss of someone close. The relationship the practitioner has established with the mother during her prenatal visits may be key in determining what is normal for this mother and what is a lack of adaptation to new motherhood. The APN can use her insight at this point to make appropriate referrals so that treatment is begun and it is not ignored.

Even with the low depression scores, the large variability within the three groups presented an issue of concern. For all mothers in the study especially those who experienced loss, the large standard deviations addressed the inability of the statistics to capture those individuals reporting at the high end of the depressive range, giving them a score of 31 to 35 on the CES-D. In a population with a potential for PPD at 4 to 15%, the APN must carefully evaluate all patients in order to identify those mother represented by the high end responders in this study.

As health care moves toward an increase of APNs practicing in primary care settings, and with the interest advanced practice nursing has traditionally shown in working

with women and families throughout the period of childbearing, an opportunity for early intervention to decrease risk of depressive symptomatology presents itself. The APN must clearly pay more attention to signs women manifest during interactions before and after the birth and pursue the identification of factors which may help in recognition of an at-risk population. The more that is understood with regard to key issues of depressive risk, the earlier preventive measures can be initiated when needed.

Education of health care providers in Obstetrics, Family Practice, and Pediatrics regarding key predictors and symptomatology related to depression must be more available. The APN must make this education part of her networking with other professionals and staff. Encouragement of CEU, CME, and in-service offerings for in-hospital and office staff about depression will help these providers in recognition of symptoms. Development, by the APN, of a short screening tool and informational pamphlets, with support of their use during prenatal visits, at the postpartum check, and at well baby visits, would be a step toward improved identification of those women at-risk for postpartum depression. As more information about depression is given to childbearing women, the ability for them to recognize feelings and the opportunity to speak openly to providers about feelings that sometimes go unacknowledged, will enable the APN to be proactive in early treatment of this disorder.

Recommendations for Further Research

It is important that other studies be done to define the impact of loss of a person during pregnancy and any potential relationship it has to depressive symptomatology in the postpartum period. The sample used to extrapolate the findings of this study was a homogenous group, limited to a specific geographic area, with a specific community defined value system. A more heterogeneous sample from a range of ethnic backgrounds and a more wide-spread geographic area may render different results. Further exploration of the relationship variable and the risk of depressive symptomatology could provide significant information when looking at prevention of depression in the postpartum period. The use of screening instruments developed specifically to determine depressive symptomatology in the postpartum period and the use of multiple sites for subjects, having varied demographics would improve the specificity to the research question and generalizability to a population for a future study. Development of a social support instrument which would determine type of loss and quantify support missing, specific to the individual lost, would generate information that was unavailable for this study.

A study that would begin to screen prepregnant women from many communities and socio-economic levels would be the most appropriate way to determine tendency to depressive

symptomatology. Following this pre-screened sample, from the prepregnant state to six weeks postpartum, with little or no attrition to the group would represent an improved generalizability. As discussed, specific tools to determine type and relationship of loss, type and frequency of social support given, and an empirical way to measure amount of support, would improve specificity of the study to loss and depression variables.

Summary

This study attempted to identify loss of a social support network member and relate this loss to potential for postpartum depression. Any loss has the possibility for placing a new mother at risk for depressive symptomatology. Any means to prevent postpartum depression for the numbers of mothers who experience this phenomenon must be explored. While there were no statistically significant results, the lack of research regarding loss of a person during pregnancy and the ramifications of this loss on postpartum depressive symptomatology, uncover a great need for specific and further studies. Within this study, there was a wide variability within the groupings for depressive symptomatology. This finding could account for a variable unmeasurable in this study that impacted the significance of the results.

The implications for decreasing dollars spent for treatment of depression, the increase in more positive

infant outcomes and maternal interactions with their infants, and the potential for improved mental health of new mothers suffering loss are all important reasons for further study of loss, and postpartum depression.

APPENDICES

Appendix A

Data Collection Method

At the Center For Healthy Beginnings, subjects were approached in the waiting room during their first prenatal visit by the data collector. The data collector explained the project and informed consent was obtained. After the prenatal visit, the data collector assisted the subjects in completing a Ten Item Checklist pertaining to the primary study. The data collector then obtained socio-demographic and physiologic data from the subject's records at the clinic and recorded the data on a collection form. At one of the next two visits, the data collector administered the CES-D and NSSQ along with other instruments related to the primary study. This administration was done in a room separate from the examination and waiting rooms. Questions were answered by the data collector for means of clarification only. The data collector identified the subjects that had delivered and placed a postpartum instrument packet in the subjects' records. At the postpartum visit, subjects completed the CES-D and NSSQ and other instruments related to the primary study. The instruments were placed in a special folder for the data collector. The data collector reviewed charts after completion of the instruments to obtain variables from the subjects' records.

APPENDIX B

UCRIHS Approval for Current Study

MICHIGAN STATE
UNIVERSITY

June 6, 1997

TO: Rachel F. Schiffman
A230 Life Sciences

RE: IRB#: 97-372
 TITLE: LOSS IN A MOTHER'S SOCIAL SUPPORT NETWORK AND
 THE RELATION TO RISK FOR DEPRESSIVE SYMPTOMOLOGY
 IN THE POSTPARTUM PERIOD

REVISION REQUESTED: N/A
 CATEGORY: 1-E
 APPROVAL DATE: 06/06/97

The University Committee on Research Involving Human Subjects' (UCRIHS) review of this project is complete. I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and methods to obtain informed consent are appropriate. Therefore, the UCRIHS approved this project and any revisions listed above.

RENEWAL: UCRIHS approval is valid for one calendar year, beginning with the approval date shown above. Investigators planning to continue a project beyond one year must use the green renewal form (enclosed with the original approval letter or when a project is renewed) to seek updated certification. There is a maximum of four such expedited renewals possible. Investigators wishing to continue a project beyond that time need to submit it again for complete review.

REVISIONS: UCRIHS must review any changes in procedures involving human subjects, prior to initiation of the change. If this is done at the time of renewal, please use the green renewal form. To revise an approved protocol at any other time during the year, send your written request to the UCRIHS Chair, requesting revised approval and referencing the project's IRB # and title. Include in your request a description of the change and any revised instruments, consent forms or advertisements that are applicable.

OFFICE OF
RESEARCH
AND
GRADUATE
STUDIES

University Committee on
Research Involving
Human Subjects
(UCRIHS)

Michigan State University
246 Administration Building
East Lansing, Michigan
48824-1046

517/355-2180
FAX: 517/432-1171

**PROBLEMS/
CHANGES:**

Should either of the following arise during the course of the work, investigators must notify UCRIHS promptly: (1) problems (unexpected side effects, complaints, etc.) involving human subjects or (2) changes in the research environment or new information indicating greater risk to the human subjects than existed when the protocol was previously reviewed and approved.

If we can be of any future help, please do not hesitate to contact us at (517)355-2180 or FAX (517)432-1171..

Sincerely,

David E. Wright, Ph.D.
UCRIHS Chair

DEW:bed

cc: Marianne J. Ball

The Michigan State University
IDEA is Institutional Diversity:
Excellence in Action.

MSU is an affirmative-action,
equal-opportunity institution

APPENDIX C

UCRIHS Approval for Original Study

MICHIGAN STATE UNIVERSITY

OFFICE OF VICE PRESIDENT FOR RESEARCH
AND DEAN OF THE GRADUATE SCHOOL

EAST LANSING • MICHIGAN • 48824-1046

March 2, 1993

TO: Rachel Schiffman, Ph.D.
Mildred Omar, Ph.D.
A230 Life Sciences

RE: IRB #: 92-115
TITLE: FACTORS INFLUENCING PREGNANCY OUTCOME
CATEGORY: 1-C
REVISION REQUESTED: February 23, 1993
APPROVAL DATE: March 1, 1993

The University Committee on Research Involving Human Subjects' (UCRIHS) review of this project is complete. I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and methods to obtain informed consent are appropriate. Therefore, the UCRIHS approved this project including any revision listed above.

UCRIHS approval is valid for one calendar year, beginning with the approval date shown above. Investigators planning to continue a project beyond one year must seek updated certification. Request for renewed approval must be accompanied by all four of the following mandatory assurances.

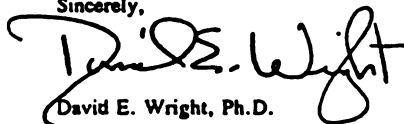
1. The human subjects protocol is the same as in previous studies.
2. There have been no ill effects suffered by the subjects due to their participation in the study.
3. There have been no complaints by the subjects or their representatives related to their participation in the study.
4. There has not been a change in the research environment nor new information which would indicate greater risk to human subjects than that assumed when the protocol was initially reviewed and approved.

There is a maximum of four such expedited renewals possible. Investigators wishing to continue a project beyond that time need to submit it again for complete review.

UCRIHS must review any changes in procedures involving human subjects, prior to initiation of the change. Investigators must notify UCRIHS promptly of any problems (unexpected side effects, complaints, etc.) involving human subjects during the course of the work.

If we can be of any future help, please do not hesitate to contact us at (517) 355-2180 or FAX (517) 336-1171.

Sincerely,



David E. Wright, Ph.D.
UCRIHS Chair

DEW:pjm

APPENDIX D

Norbeck Social Support Questionnaire: Support Network Data

Number _____
Date _____

Page 1

SOCIAL SUPPORT QUESTIONNAIRE

PLEASE READ ALL DIRECTIONS
ON THIS PAGE BEFORE STARTING.

Please list each significant person in your life on the right. Consider all the persons who provide personal support for you or who are important to you.

Use only first names or initials, and then indicate the relationship, as in the following example.

Example:	First Name or Initials	Relationship
1.	MARY T.	FRIEND
2.	BOB	BROTHER
3.	M. T.	MOTHER
4.	SAM	FRIEND
5.	MRS. R.	NEIGHBOR

etc.

Use the following list to help you think of the people important to you, and list as many people as apply in your case.

- spouse or partner
- family members or relatives
- friends
- work or school associates
- neighbors
- health care providers
- counselor or therapist
- minister/priest/rabbi
- other

You do not have to use all 24 spaces. Use as many spaces as you have important persons in your life.

WHEN YOU HAVE FINISHED YOUR LIST, PLEASE TURN TO PAGE 2.

© 1980 by Jane S. Norbeck, D.H.Sc.
University of California, San Francisco

PERSONAL NETWORK

Relationship

First Name or Initials

1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____
11.	_____	_____
12.	_____	_____
13.	_____	_____
14.	_____	_____
15.	_____	_____
16.	_____	_____
17.	_____	_____
18.	_____	_____
19.	_____	_____
20.	_____	_____
21.	_____	_____
22.	_____	_____
23.	_____	_____
24.	_____	_____

APPENDIX E

Norbeck Social Support Questionnaire: Network Loss Data

9. During the past year, have you lost any important relationships due to moving, a job change, divorce or separation, death, or some other reason?

___ 0. No
___ 1. Yes

IF YES:

- 9a. Please indicate the number of persons from each category who are *no longer available* to you.

___ spouse or partner
___ family members or relatives
___ friends
___ work or school associates
___ neighbors
___ health care providers
___ counselor or therapist
___ minister/priest/rabbi
___ other (specify) _____

- 9b. Overall, how much of your support was provided by these people who are no longer available to you?

___ 0. none at all
___ 1. a little
___ 2. a moderate amount
___ 3. quite a bit
___ 4. a great deal

APPENDIX F

Center for Epidemiologic Studies Depression Scale

CES-D Scale (A)

Circle the number for each statement which best describes how often you felt or behaved this way — DURING THE PAST WEEK.

	Rarely or None of the Time (Less than 1 Day)	Some or a Little of the Time (1-2 Days)	Occasionally or a Moderate Amount of Time (3-4 days)	Most or All of the Time (5-7 Days)
DURING THE PAST WEEK:				
1. I was bothered by things that usually don't bother me.....	0	1	2	3
2. I did not feel like eating; my appetite was poor.....	0	1	2	3
3. I felt that I could not shake off the blues even with the help from my family and friends.....	0	1	2	3
4. I felt that I was just as good as other people.....	0	1	2	3
5. I had trouble keeping my mind on what I was doing.....	0	1	2	3
6. I felt depressed.....	0	1	2	3
7. I felt that everything I did was an effort.....	0	1	2	3
8. I felt hopeful about the future.....	0	1	2	3
9. I thought my life had been a failure.....	0	1	2	3
10. I felt fearful.....	0	1	2	3
11. My sleep was restless.....	0	1	2	3
12. I was happy.....	0	1	2	3
13. I talked less than usual.....	0	1	2	3
14. I felt lonely.....	0	1	2	3
15. People were unfriendly.....	0	1	2	3
16. I enjoyed life.....	0	1	2	3
17. I had crying spells.....	0	1	2	3
18. I felt sad.....	0	1	2	3
I felt that people disliked me.....	0	1	2	3
20. I could not get "going".....	0	1	2	3

LIST OF REFERENCES

References

Aaronson, L.S. (1989). Perceived and received support: Effects on health behavior during pregnancy. Nursing Research, 38(1), 4-9.

Adcock, J. (1993). Expectations they cannot meet: Understanding postnatal depression. Professional Nurse, 8, 703-708.

Affonso, D. (1987). Assessment of maternal postpartum adaptation. Public Health Nursing, 4(1), 9-20.

Affonso, D., & Domino, G. (1984). Postpartum depression: A review. Birth, 11, 231-235.

Affonso, D., Lovett, S., Paul, S., Arizmendi, R., Nussbaum, R., Newman, L., & Johnson, B. (1991). Predictors of depression symptoms during pregnancy and postpartum. Journal of Psychosomatic Obstetrics and Gynaecology, 12, 255-271.

Affonso, D., Lovett, S., Paul, S., & Sheptak, S. (1990). A standardized interview that differentiates pregnancy and postpartum symptoms from perinatal clinical depression. Birth, 17, 121-130.

Arizmendi, T.G., & Affonso, D.D. (1984). Research on psychosocial factors and postpartum depression: A critique. Birth, 11, 237-243.

Barnes, J. (1972). Social networks. Reading, MA: Addison-Wesley.

Barnes, G.E., & Prosen, H. (1984). Depression in

Canadian general practice attenders. Canadian Journal of Psychiatry, 29, 2-10.

Barnet, B., Joffe, A., Duggan, A. Wilson, M.D., & Repke, J.T. (1996). Depressive symptoms, stress and social support in pregnant and postpartum adolescents. Archives of Pediatrics and Adolescent Medicine, 150(1), 64-69.

Beck, C. (1992). The lived experience of postpartum depression: A phenomenological study. Nursing Research, 41(3), 166-170.

Beck, C. (1993). Teetering on the edge: A substantive theory of postpartum depression. Nursing Research, 42(1), 42-48.

Beck, C. (1995). Screening methods for postpartum depression. Journal of Obstetric, Gynecologic and Neonatal Nursing, 24(4), 308-312.

Beck, C. (1996). A meta-analysis of predictors of postpartum depression. Nursing Research, 45(5), 297-303.

Beck, A.T., Ward, C.H., Mendelson, M., Mock, J. & Erbaugh, J. (1961). An inventory for measuring depression. Archives of General Psychiatry, 4, 561-71.

Boss, P. (1988). Family stress management. Thousand Oaks, CA: Sage Publishing.

Boyer, D. (1990). Predictions of postpartum depression. NAACOG's Clinical Issues in Perinatal and Women's Health Nursing, 1, 359-68.

Brown, M.A. (1986). Social support, stress and health:

A comparison of expectant mothers and fathers. Nursing Research, 35, 72-76.

Chalmers, B., & Chalmers, B. (1986). Postpartum depression: A revised perspective. Journal of Psychosomatic Obstetrics and Gynecology, 5, 93-105.

Chalmers, B. & Meyer, D. (1994). Companionship in the perinatal period: A cross-cultural survey of women's experience. Journal of Nurse-Midwifery, 39(4), 265-272.

Chen, C. (1995). Etiology of postpartum depression: A review. Kaohsiung Journal of Medical Science, 11, 1-7.

Clement, S. (1995). "Listening visits" in pregnancy: A strategy for preventing postnatal depression. Midwifery, 11, 75-80.

Collins, N.L., Dunkel-Schetter, C., Lobel, M., & Scrimshaw, C.M. (1993). Social support in pregnancy: Psychosocial correlates of birth outcomes and postpartum depression. Journal of Personality and Social Psychology, 65, 1243-1258.

Cox, J. (1989). Postnatal depression: A serious and neglected postpartum complication. Bailliere's Clinical Obstetrics and Gynaecology, 3(4), 839-855.

Cox, J.L., Holden, J.M., & Sagovsky, R. (1987). Detection of postnatal depression: Development of the ten-item Edinburgh Postnatal Depression Scale. British Journal of Psychiatry, 150, 782-786.

Cronenwett, L.R. (1985). Network structure, social

support and psychological outcomes of pregnancy. Nursing Research, 34, 93-99.

Cutrona, C., & Russell, D. (1989). Ratings of social support by adolescents and adult informants: Degree of correspondence and prediction of depressive symptoms. Journal of Personality and Social Psychology, 57, 723-730.

Cutrona, C., & Troutman, B. (1986). Social support, infant temperament, and parenting self-efficacy: A mediational model of postpartum depression. Child Development, 57, 1507-1518.

Diagnostic and statistical manual of mental disorders (4th ed.) (1994). Washington, DC: American Psychological Association.

Depression Guideline Panel. (1993). Depression in primary care: Volume 1. Detection and Diagnosis (Clinical Practice Guideline No. 5, AHCPR Publication No. 93-0550). Rockville, MD: U.S. Department of Health and Human Services.

Driscoll, J.W. (1990). Maternal parenthood and the grief process. Journal of Perinatal and Neonatal Nursing, 4, 1-10.

Ensel, W.M. (1986). Measuring depression: The DES-D scale. In N. Linn, A. Dean & W.M. Ensle (Eds.), Social Support, life events and depression (pp 51-70). Orlando, FL: Academic Press.

Frate, A.D. Cowen, J.B., Rutledge, A.H. & Glasser, M. (1979). Behavioral reactions during the post partum period:

Experiences of 108 women. Women and Health, 4(4), 355-71.

Galbreath, J.G. (1990). Sister Callista Roy. In Nursing theories: The base for professional nursing practice, 3rd. ed., J.B. George (Ed.) Norwalk, CT: Appleton & Lange. pp. 231-258.

Gerrard, J., Holden, J.M., Elliott, S.A., McKenzie, P., McKenzie, J., & Cox, J.L. (1993). A trainer's perspective of an innovative programme teaching health visitors about the detection, treatment and prevention of postnatal depression. Journal of Advanced Nursing, 18(11) 1825-1832.

Gjerdingen, D.K. & Chaloner, K.M. (1994). The relationship of women's postpartum mental health to employment, childbirth, and social support. The Journal of Family Practice, 38(5), 465-472.

Gotlib, I.H., Whiffen, V.E., Mount, J.H., Milne, K., & Cordy, N.I. (1989). Prevalence rates and demographic characteristics associated with depression in pregnancy and the postpartum. Journal of Consulting and Clinical Psychology, 57(2), 269-274.

Griebsma, J., Marcollo, J., Casey, C., Cherry, F., Vary, E., & Walton, V. (1994). The incidence of postnatal depression in a rural area and the needs of affected women. Australian Journal of Advanced Nursing, 11(4), 19-23.

Hall, L.A., Gurley, D.N., Sachs, B., & Kryscio, R.J. (1991). Psychosocial predictors of maternal depressive symptoms, parenting attitudes, and child behaviors in

single-parent families. Nursing Research, 40(4), 214-220.

Hayworth, J. Little, B.C., Carter, S.B. et al. (1980) A predictive study of postpartum depression: Some predisposing characteristics. British Journal of Medical Psychology, 53, 161-67.

Husaini, B.A., Neff, J.A., Harrington, J.B., Hughes, M.D. & Stone, R.H. (1980). Depression in rural communities: Validating the CES-D scale. Journal of Community Psychology, 8, 20-27.

Jermain, D.M. (1992). Psychopharmacologic approach to postpartum depression. Journal of Women's Health, 1(1), 47-52.

Johnson, T.B. & Apgar, B. (1997). Postpartum depression. The Female Patient: Total Health Care for Women, 22(9), 12-20.

Jones-Webb, R.J. & Snowden, L.R. (1993). Symptoms of depression among blacks and whites. American Journal of Public Health, 83, 240-244.

Kahn, R.L. (1979). Aging and social support. In M.W. Riley (Ed.), Aging from birth to death: Interdisciplinary perspectives (pp. 77-91). Boulder CO: Westview Press.

Kahn, R., & Antonucci, T. (1981). Convoys over the life course: Attachment roles and social support. In P.B. Baltes & O. Brim (Eds.), Life span development and behavior (pp. 253-286). New York, NY: Academic Press.

Knops, G. (1993). Postpartum mood disorders: A

startling contrast to the joy of birth. Postgraduate Medicine, 93(3), 103-116.

Kumar, R. (1990). An overview of postpartum psychiatric disorders. NAACOG's Clinical Issues in Perinatal and Women's Health Nursing, 1(3), 351-358.

Lantican, L.S. & Corona, D.E. (1992). Comparison of the social support networks of Filipino and Mexican-American primigravidas. Healthcare for Women International, 13, 329-38.

Lederman, R. (1984). Psychosocial adaptation in pregnancy: Assessment of seven dimensions of maternal development. Englewood Cliffs, NJ: Prentice-Hall.

Logsdon, M., McBride, A., & Birkimer, J. (1994). Social support and postpartum depression. Research in Nursing and Health, 17, 449-457.

Martell, L. (1990a). Postpartum depression as a family problem. Journal of Maternal Child Nursing, 15, 90-93.

Martell, L. (1990b). The mother-daughter relationship during daughter's first pregnancy: The transition experience. Holistic Nursing Practice, 4(3), 47-55.

May, K.M. (1992). Social networks and health-seeking experiences of pregnant teens. Journal of Obstetric, Gynecologic and Neonatal Nursing, 21, 280-284.

McIntosh, J. (1993). Postpartum depression: Women's help-seeking behavior and perceptions of cause. Journal of Advanced Nursing, 18, 178-184.

Mercer, R.T., & Ferketich, S.L. (1988). Stress and social support as predictors of anxiety and depression during pregnancy. Advances in Nursing Science, 10(2), 26-39.

Milgrom, J. (1994). Mother-infant interactions in postpartum depression: An early intervention program. Australian Journal of Advanced Nursing, 11(4), 29-38.

Mills, E.P., Finchilescu, G., & Lea, S.J. (1995). Postnatal depression: An examination of psychosocial factors. South African Medical Journal, 85(2), 99-105.

Nalepka, C., & Coblentz, M. (1995). Incidence of postpartum depression following antepartal intervention. The Journal of Perinatal Education, 4(2), 29-37.

Nichols, M.R. (1993). Paternal perspectives of the childbirth experience. Journal of Maternal-Child Nursing, 21, 99-108.

Nicolson, P. (1990). Understanding postnatal depression: A mother-centered approach. Journal of Advanced Nursing, 15, 689-695.

Norbeck, J. S., & Anderson, N.J. (1989). Psychosocial predictors of pregnancy outcomes in low-income black, Hispanic, and white women. Nursing Research, 38(3) 204-209.

Norbeck, J. S., Lindsey, A. M., & Carrieri, V. L. (1981). The development of an instrument to measure social support. Nursing Research, 30(4) 264-269.

Norbeck, J. S., Lindsey, A. M., & Carrieri, V. L. (1983). Further development of the Norbeck Social Support Questionnaire: Normative data and validity testing. Nursing Research, 32, 4-9.

Norbeck, J.S., & Tilden, V.P. (1983). Life stress, social support, and emotional disequilibrium in complications of pregnancy: A prospective, multivariate study. Journal of Health and Social Behavior, 24, 30-46.

O'Hara, M. (1986). Social support, life events, and depression during pregnancy and the puerperium. Archives of General Psychiatry, 43, 569-573.

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

Parchman, M.L. (1993). Depression, In Ambulatory medicine: The primary care of families, M.B. Mengel & L.P. Schwiebert (Eds.) Nowalk, CT: Appleton & Lange. pp. 518-524.

Pariser, S.F. (1993). Women and mood disorders: Menarche to menopause. Annals of Clinical Psychiatry, 5, 240-254.

Polomeno, V. (1996). Social support during pregnancy. International Journal of Childbirth Education, 11(2), 14-21.

Radloff, L.S. (1977). The CES-D Scale: A new self-report depression scale for research in the general population. Applied Psychological Measurements, 1, 385-401.

Radloff, L.S. & Locke, B.Z. (1986). The community mental health assessment survey and the CES-D scale. In M.M. Weissman, J.K Myers & C.E. Ross (Eds.), Community surveys of psychiatric disorders (pp. 177-89). New Brunswick, NJ: Rutgers University Press.

Reece, S. M. (1993). Social support and the early maternal experience of primiparas over 35. Maternal-Child Nursing Journal, 21(3), pp. 91-98.

Roberts, R.E., Andrews, J.A., Lewinsohn, P.M. & Hops, H. (1990). Assessment of depression in adolescents using the Center for Epidemiologic Depression Scale. psychological assessment: A Journal of Consulting and Clinical Psychology, 2, 122-28.

Robinson, G., Olmstead, M., & Garner, D. (1989). Predictors of postpartum adjustment. Acta Psychiatrica Scandinavica, 80, 561-565.

Roy, C. (1984). Introduction to nursing: An adaptation model (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Rubin, R. (1984). Maternal tasks. In Maternal Identity and the Maternal Experience. (pp. 52-69). New York, NY: Springer Publishing.

Saks, B.R., Frank, J.B., Lowe, T.L., Berman, W., Naftolin, F., & Cohen, D.J. (1985). Depressed mood during pregnancy and the puerperium: Clinical recognition and implications for clinical practice. American Journal of Psychiatry, 142, 728-731.

Schiffman, R. & Omar, M. (1994). Factors influencing pregnancy outcome at the Center for Healthy Beginnings. Unpublished manuscript, Michigan State University, East Lansing, MI

Schneider, J. (1984). Stress, loss and grief. Rockville, MD: Aspen Systems Corporation.

Seguin, L., Potvin, L., St. Denis, M., & Loiselle, J. (1995). Chronic stressors, social support, and depression during pregnancy. Obstetrics and gynecology, 85(4), 583-589.

Stewart, M. (1993). Integrating social support in nursing. Thousand Oaks, CA: Sage Publishing.

Tarkka, M. & Paunonen, M. (1996). Social support and its impact on mother's experience of childbirth. Journal of Advanced Nursing, 23, 70-75.

Thoits, P. (1984). Explaining distributions of psychological vulnerability: Lack of social support in the face of life stress. Social Forces, 63, 453-481.

Thurtle, V. (1995). Post-natal depression: The relevance of sociological approaches. Journal of Advanced Nursing, 22 (3), 416-424.

Tilden, V.P. (1983). The relation of selected psychosocial variables to single status of adult women during pregnancy. Nursing Research, 33(2), 102-107.

Turner, R.J., Grindstaff, C.F., & Phillips, N. (1990). Social support and outcomes in teenage pregnancy. Journal

of Health and Social Behavior, 31, 43-57.

Ugarriza, D.N. (1995). A descriptive study of postpartum depression. Perspectives in Psychiatric Care, 31(3), 25-29.

Unterman, R.R., Posner, N.A., & Williams, K.N. (1990). Postpartum depressive disorders: Changing trends. Birth, 17(3), 131-137.

Viinamaki, H., Rastas, S., Tukeva, L., Kuha, S., Niskanen, L., & Saarikski, S. (1994). Postpartum mental health. Journal of Psychosomatic Obstetrics and Gynaecology, 15(3), 141-146.

Vines, S.W., & Williams-Burgess, C. (1994). Effects of a community health nursing parent-baby (ad)venture program on depression and other selected maternal-child health outcomes.

Public Health Nursing, 11(3), 188-195.

Watson, J., Elliot, S., Rugg, A & Brough, D. (1984). Psychiatric disorder in pregnancy and the first postnatal year. British Journal of Psychiatry, 144, 453-62.

Weissman, M.M., Sholomskas, D., Pottenger, M., Prisoff, B.A. & Locke, B.Z. (1977). Assessing depressive symptoms in five psychiatric populations: A validation study. American Journal of Epidemiology, 106, 203-14.

Westbrook, M. (1978). The reaction to childbearing and early maternal experience of women with differing marital relationships. British Journal of Medical

Psychology, 51, 191-199.

Whiffen, V. (1988). Vulnerability to postpartum depression: A prospective multivariate study. Journal of Abnormal Psychology, 97, 467-474.

Zachariah, R. (1994). Mother-daughter and husband-wife attachment as predictors of psychological well-being during pregnancy. Clinical Nursing Research, 3(4), 371-92.

Zuckerman, B., Hortensia, A., Bauchner, H. & Cabral, C. (1989). Depressive symptoms during pregnancy: Relationship to poor health behaviors. American Journal of Obstetrics and Gynecology, 106(5), 1107-11.

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