THE INFLUENCE OF CERTAIN VARIABLES
UPON THE DEVELOPMENT OF
POSTPARTUM BLUES

by

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ABSTRACT

The purpose of this study was to determine the influence of certain variables upon the development of Postpartum Blues. Questions asked were: Do factors related to maternal role conflict influence the development of Postpartum Blues? Do specific endocrine factors related to the menstrual cycle influence the development of Postpartum Blues? Does a reduction in the number of sleep cycles influence the development of Postpartum Blues?

Two semi-structured interview schedules and a questionnaire were constructed following a review of the literature to derive information pertinent to the research problem. The Beck Depression Inventory was also administered. The study population consisted of twenty-nine women. The study population was restricted to women who delivered full-term, apparently healthy infants in one hospital in Vancouver. Certain other criteria of language, demography, health, and obstetrics were applied. Analysis of the data included descriptive analysis, frequency tables, and the use of the chi square test.

The findings of the study showed that 70 percent of the women experienced Postpartum Blues. The factors related to maternal role conflict, either singly or in combination, did not significantly influence the development of Postpartum Blues. Nor did the endocrine factors related
to the menstrual cycle influence the development of Postpartum Blues. However, it was found that a reduction in sleep cycles over a four-day perinatal period significantly influenced the development of Postpartum Blues. Of the women who experienced a sleep deficiency, 85 percent developed Postpartum Blues.

The study suggests that more attention be paid to the sleep needs of postpartum women, both in hospital and at home in the community.
ACKNOWLEDGEMENTS

I wish to express my appreciation to the twenty-nine postpartum women who participated in this study. I would also like to thank the Director of Nursing and the nursing staff of the hospital in which part of the study was conducted. Finally, I wish to thank Assistant-Professors Helen Elfert and Sylvia Holmes for their advice and encouragement.
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CHAPTER I.

INTRODUCTION TO THE STUDY

I. INTRODUCTION

The rapid socio-economic advances of this century have caused changes which increase the stress that childbearing places upon women. Some of the changes include greater urbanization, a shift from the extended family structure to that of the nuclear family, smaller families, and the changing status of women. Childbearing has been described as a developmental crisis, a period in which "there is marked physical, psychological, and social change that is characterized by common 'disturbances' in thought and feeling."¹

Although medical science has greatly influenced the biological outcome of childbearing, the emotional outcome of childbearing has not shown such favourable progress.² Postpartum depression has been considerably studied in psy-


chiastic hospitals. However, the much milder form of post-partum depression, known as the Postpartum Blues, has received little attention in the literature.

While the incidence rate of Postpartum Blues has been estimated as high as eighty percent, the syndrome is frequently referred to as a normal sequel to childbirth. In fact, Pitt described the syndrome as trivial and fleeting. Yalom also concurred with this viewpoint, as did Joseph and Peck. On the other hand, one study suggests that more than half of childbearing women showed subjective evidence of anxiety and or depression. It has been the writer's experience as a midwife that the Postpartum Blues can be a very distressing episode which is long remembered by some women who experience the syndrome. In spite of the transitory nature of the Postpartum Blues, there is evidence that a history of Postpartum Blues is frequently a factor in the more severe and longer-lasting postpartum depression.

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3 Hamilton, loc. cit.
7 Melges, op. cit., p. 98; Pitt, "'Atypical' Depression Following Childbirth," p. 1332; Yalom, loc. cit.
The current medical and nursing literature dealing with Postpartum Blues indicates the importance of assisting women to meet their emotional needs. A study by Gordon, Kapostins, and Gordon revealed that assistance from nurses and doctors in overcoming emotional difficulties experienced in the puerperium had extremely beneficial results. Likewise, Auerback urged that nurses and doctors lend emotional support to postpartum women to help them cope with the new and changing demands of parenthood.

Yet, there is little agreement in the literature as to the cause of these emotional difficulties. Many different factors have been attributed to Postpartum Blues, but there is no firm evidence pointing to common factors. It was felt that further study of related factors to the development of Postpartum Blues could provide stronger guidelines for people involved in the care of postpartum women.

II. STATEMENT OF THE PROBLEM

The purpose of this descriptive study was to determine the influence of certain variables upon the development of Postpartum Blues.

The following questions provided the focus of the


study: (1) Do factors related to maternal role conflict influence the development of Postpartum Blues? (2) Do specific endocrine factors related to the menstrual cycle influence the development of Postpartum Blues? (3) Does a reduction in the number of sleep cycles influence the development of Postpartum Blues?

III. SIGNIFICANCE OF THE PROBLEM

Postpartum Blues, according to Riker, "gets scanty attention from medical researchers, so the exact causes remain obscure." In Canada, as elsewhere, nurses are involved in the care of postpartum women. In a study carried out in Calgary, Alberta, Jordan reported that more women in a family-centred maternity care group in hospital sought help with psychological problems from the nurse than from the doctor. Moreover, her findings showed that new mothers at home in the community wished that they could call upon a predesignated nurse for assurance and advice.

Joseph and Peck noted that the developmental crisis of child-bearing "provides a unique opportunity for the nurse to intervene." The crisis intervener is defined by Parad as "one who enters the problem situation and helps those

13 Joseph and Peck, op. cit., p. 554.
involved mobilize their strengths in order to move out of the crisis or crisis-like state in a manner which is acceptable to those involved."^{14}

Clearly, then, the nurse is in an ideal position to assist postpartum women to reduce the stresses of this period. The nurse as intervener, must understand the factors which cause the distress of postpartum blues. Further study of implicated variables would increase the nurse's understanding of the Postpartum Blues syndrome. Thus postpartum women may be further assisted to minimize the effect of the syndrome or to maximize their resources to cope with it.

IV. ASSUMPTIONS OF THE STUDY

The study was based on the assumption that: (1) Postpartum Blues is an entity that can be distinguished from other forms of depression by (a) its duration, and (b) its degree of severity, according to the Beck Depression Inventory and the self-declared statements of the respondents. (2) That each subject interviewed is sufficiently cognizant of her own feelings and interpersonal behaviour that she can select from the interview questionnaires the statement most appropriate to her feelings and behaviour.

V. DEFINITIONS OF TERMS USED

For the purpose of this study the following terms are defined.

^{14}Parad, op. cit., p. 2.
Apgar Score

This scoring system was devised to enable a clinical evaluation to be made of a baby's condition at one minute after birth. The five vital signs, shown in Table 1, are each scored 0, 1, or 2, the total of which may be 1-10 (poor to excellent status).

Table 1\textsuperscript{15}

Apgar Scoring System

\begin{tabular}{|l|c|c|c|}
\hline
Sign & 0 & 1 & 2 \\
\hline
Heart rate & Not detectable & Slow (below 100) & Over 100 \\
\hline
Respiratory effort & Absent & Slow, irregular & Good, crying \\
\hline
Muscle tone & Flaccid & Some flexion of extremities & Active motion of extremities \\
\hline
Reflex irritability & No response & Grimace & Cry \\
1. response to slap on sole of foot & & & \\
2. response to catheter in nostril (tested after oropharynx is clear) & No response & Grimace & Cough or sneeze \\
\hline
Color & Blue, pale & Body pink, extremities blue & Completely pink \\
\hline
\end{tabular}

Childbearing Process

The period from conception until the reproductive organs have returned to normal.

Conflict with Maternal Role

The difficulty experienced in the assumption of the new responsibilities and feelings of motherhood and their integration with existing roles and interests.

Dysmenorrhoea

Painful menstruation.

Early Menarche

Menarche refers to the appearance of the first menstrual period, usually occurring between the age of eleven and fifteen years. Early menarche is considered to be under the age of eleven years.

Multipara

A woman who has experienced two or more labours in the bearing of viable infants.

Postpartum Blues, Postpartum Blues Syndrome

These terms are used interchangeably and are often referred to in the literature as Postpartum "Blues" or "Postpartum Blues" syndrome.

The terms refer to the transitory mild depression occurring within the postpartum period.

Premenstrual Tension

A state of depression or anxiety which may occur several days before menstruation.
Primipara

A woman who has experienced one labour in the bearing of a viable infant or viable infants.

Puerperium, Postpartum Period

The terms are used interchangeably and refer to the six-week period following childbirth, during which the reproductive organs return to their pregravid state.

Social Desirability

A systematic way of answering questions about oneself in a socially approved manner rather than in relation to the content of the question.

VI. LIMITATIONS OF THE STUDY

Recognized limitations of the study were as follows: (1) The small sample size of the population resident in the Greater Vancouver area and selected from one hospital restricted the findings of the study to this sample only. Because of this, the findings cannot be generalized to other populations. (2) The study was conducted during the months of December and January, a time of festivity, which may have caused the sample to be unrepresentative of the population at other times of the year. (3) The data-gathering instruments used in the study, with the exception of a Depression Inventory, were relatively untested. Therefore, the degree of validity and reliability of the instrumentation were not established. Also, the possibility of social desirability biasing the findings of the study cannot
be ruled out because a test for social desirability was not administered.
CHAPTER II.

REVIEW OF THE LITERATURE

I. INTRODUCTION

Although reference had been made to Postpartum Blues in the nineteenth century, it was not until 1952 that the syndrome aroused sufficient interest for study.¹ Yet, the studies that have been done are meagre and lack definitive answers to the syndrome. In the last twenty years a number of small studies were reported in the United States of America and in Europe. However, apart from these, no major studies appeared in the accessible literature.

The literature reviewed here discusses theory and research under the five main headings of the puerperium as a developmental crisis; the changes occurring in the puerperium; some concepts of role theory; sleep needs; and the Postpartum Blues syndrome.

II. THE PUERPERIUM AS A DEVELOPMENTAL CRISIS

The puerperium is generally accepted as the period between the termination of labour and the return of the reproductive organs to their normal condition, usually de-

fined as forty-two days. This is a period in which the young woman is called upon to adapt rapidly to enormous biophysical, psychosocial, and environmental changes. Therefore, the puerperium may be viewed as a developmental stage, during which time an individual is much more susceptible to stress. Regarding the woman as more vulnerable in the puerperium, Highley noted that an effective adaptive process is required in order to meet the marked changes in the status and lifestyle created by childbearing.²

Further to this, Kane regarded the puerperium as a developmental crisis, a viewpoint also supported by Robischon and Scott.³ Parad commented that developmental crises are frequently seen as "normal" crises because the experiences are common to all people in that particular stage of development.⁴ During a developmental crisis there are tasks which must be effectively accomplished in order that the next developmental stage may realize its full potential for further growth and development.⁵ The tasks to be achieved in the puerperium


⁵Ibid.
fall into the biophysical, psychosocial, and environmental categories previously mentioned and to be discussed under the changes occurring in the puerperium. Should these tasks not be adequately achieved, then some degree of disturbance ensues.

Stating this another way, Caplan said that a crisis may occur when a person is faced with a problem he cannot solve. According to Caplan, a person's ability to withstand a crisis depends on three factors: (1) the capacity to deal with anxiety and stress, and to maintain equilibrium, (2) the capacity to effectively solve problems, based on reality, and (3) the repertoire of efficient coping mechanisms which facilitate the maintenance of equilibrium.

Parad defined a crisis as follows:

a hazardous circumstance or stress which constitutes a threat for individuals and families because (a) the stress jeopardized important life goals such as health, security, and affectional ties, and (b) the problems posed cannot be immediately solved by the immediate resources of the ego, thereby generating a high level of uncertainty, anxiety, and tension.

A study by LeMasters, in which forty-six middle class couples participated, found that new parenthood constitutes a crisis situation for 83 percent of the sample.

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7 Ibid., pp. 38-41.
LeMasters pointed out that the upheaval occurring in the family as a social system, causes roles to be redesignated, status positions to be shifted, values to be readjusted, and new ways to be found for meeting needs. Yoshioka suggested that the life experiences of some women are limited and that their resources for coping with crises are inadequate.  

If the stresses of a crisis are poorly coped with, Rapaport assumed that old psychological conflicts may be revived or new conflicts may appear, either of which reduce the state of mental health. On the other hand, Rapaport stated, if the crisis is well-managed, then the individual will gain in maturation or development. It was also noted that individuals in crisis situations are more amenable to therapeutic counselling.

In supporting this view, Bloom related that assisting individuals when they are in crisis situations can significantly improve their mental health.


12 Ibid.

III. THE CHANGES OCCURRING IN THE PUERPERIUM

Biophysical Changes

The biophysical changes occurring in the puerperium are enormous. With the birth of the baby there is immediate release of pressure on crowded internal organs, as well as the instant weight loss of the baby. By the end of one week the total weight loss experienced by the postpartum woman is about twenty pounds.\textsuperscript{14} Within twenty-four hours of delivery, the additional 30 percent blood volume, which evolved during pregnancy, is eliminated. The puerperium is also the time during which the generative organs return to their pregravid state. Thus, the weight of the uterus, which is two pounds following labour, is reduced to two and one half ounces by the end of six weeks.\textsuperscript{15} Lochia, the discharge from the uterus after birth, continues for ten to fifteen days.

Other changes taking place in the puerperium are dramatic endocrine changes. Lactation is initiated by the hormone prolactin, which is produced by the anterior pituitary gland. The pregnancy hormones, the oestrogens and progesterone, are produced by the placenta in increasing amounts during pregnancy. Immediately prior to childbirth, the production of oestrogens is ten-fold the maximal pre-pregnancy level.

\textsuperscript{14}Reva Rubin, "Puerperal Change," \textit{Nursing Outlook}, IX (December, 1961), 753.

while that of progesterone is increased twenty-five times.\textsuperscript{16} With the expulsion of the placenta there is an abrupt fall in the levels of these hormones and the levels remain very low until the menstrual cycle is resumed.\textsuperscript{17} The effect of the sudden changes in these hormone levels has often been attributed, although not proven, to the lability of mood observed in postpartum women.\textsuperscript{18}

Psychosocial and Environmental Changes

The lability of mood is shown by sudden swings from expressions of happiness to those of sadness and by an oversensitivity to the remarks and actions of others.\textsuperscript{19} As well as lability of mood, a state of mild confusion has often been reported as frequently occurring in postpartum women.\textsuperscript{20} The changes in the roles of postpartum women are considerable and will be discussed separately. Environmental changes are also marked. The literature commonly cited disruption in the activities of daily living incurred by the hospital stay. The changes required in adjusting to hospital routines are

\textsuperscript{16}Hamilton, op. cit., pp. 112-13.
\textsuperscript{17}Ibid., p. 113.
\textsuperscript{19}Robin, loc. cit.
\textsuperscript{20}Hamilton, op. cit., p. 109; Kane, op. cit., p. 101; Robin, op. cit., p. 147.
usually quite exacting. In addition, postpartum women must contend with hospital noises, interruption of sleep, and physical discomforts. Following the hospital stay the mother's return home with a new family member constitutes further changes. For the mother with her first baby the arrival home means that she must now assume the responsibility of meeting the baby's needs when she may be uncertain of what those needs are or how they can be met. For the mother taking a baby to a home in which there is already a child or children, she must not only care for the new baby but meet the needs of the older offspring in their adjustment to a new sibling. In either case, the mother must be prepared to reduce her usual amount of sleep and rest, as well as cope with any other changes involved in adding a new member to the family unit.

IV. ROLE THEORY CONCEPTS

Role theory has been described by Wrightsman as an orientation toward interpersonal behaviour. Wrightsman agreed with Sarbin that role theory regards human conduct as the product of the interaction of self and role. The term role is generally defined as "the set of behaviours or functions appropriate for a person holding a particular position within a particular social context." Rubin concurred with

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22 Ibid.

23 Ibid.
Linton in defining a position as "the achieved or ascribed social status resulting from the performed or anticipated activities of persons enacting specific roles, a cognitive organization of rights and obligations in a socially defined situation." Thus, every person occupies a number of positions and enacts a number of roles. Robischon and Scott defined a role as a pattern of needs and goals, beliefs, feelings, values, attitudes, and actions, expected by the community, which should be characteristic of the occupant of a position. Accordingly, role behaviours are learned, conditioned, and reinforced. That poorly defined roles may lead to role conflict is noted by Robischon and many other researchers. Other factors leading to role conflict are conflicting pressures, complexity of roles to be learned, and difference between role and emotional needs. Robischon emphasized that role conflict is appropriate at times and that the anxiety and tension aroused may be used to facilitate healthy adaptation.

The goal in the process of role-taking is identity. Rubin, concurring with Erickson, described an established identity as a sense of being in a role, a sense of ease about

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25 Robischon and Scott, op. cit., p. 52
26 Ibid., p. 53.
27 Ibid., p. 54.
Rubin reported a study to determine how the maternal role identity is achieved. She built upon Mead's concept of "Taking-in-the-role-of-other" and Sarbin's concept of "adopting the ways of others" to describe the attainment of the maternal role.

According to Rubin there are three dimensions to becoming a mother; the self-concept or self system as object, the process as mode, and the model or referent as the subject. The data obtained by the study of the self system were classified into three categories as the ideal image, the self image, and the body image. Rubin stated that the taking in of the maternal role is a continuous process carried out by a series of operations. These operations fit into five categories which are: mimicry, role-play, fantasy, introjection-projection-rejection, and grief work. The five operations occur in sequential order and vary in the time taken for each.

Rubin classified the five operations into the following phases: (1) the "taking-on" phase, (2) the "taking-in" phase, and (3) the "letting-go" phase. The taking-on phase includes the operations of mimicry and role play. Mimicry refers to the adapting of behaviours, such as dress, to

29 Ibid., pp. 237-45.
30 Ibid., p. 240.
31 Ibid., pp. 240-45.
those which symbolize the status the woman wishes to attain. Although similar to mimicry, role play symbolizes and acts out the expected behaviour. The taking-in phase involves the operation of fantasy and the operation of introjection-projection-rejection. Fantasy differs from role play in that there is no acting-out. Wishes, fears, day-dreams, and dreams involve the self. The baby is seen as "an extension of self, the wished-for self, and the dreaded-self." The fantasy operation promotes activity such as planning, efforts to be realistic, and efforts to gain more information by which to verify or negate the fantasy material. The introjection-projection-rejection operation is similar to mimicry but the distinction is that it begins with self (introjection), moves to find a role model from without (projection), and compares the behaviour of the role model with the behaviour being experienced. In the event that there is poor correspondence, that role model is rejected and another sought. Rubin described the operation in the letting-go phase as grief work. Grief work is the letting-go of former identities which are associated with roles incompatible with the anticipated new role.

Finally, Rubin examined the model in relation to attainment of maternal role. The study showed that all of

32 Ibid., p. 242.

the subjects began with their own mothers, or revived memories of their mothers, for each phase of role attainment. The mothers were then replaced by peers in parallel or higher stages toward role attainment. It was found that primiparas mostly chose peer models from the extended family. The grief work in relation to the subject's mothers involved longing for and separation from comforting maternal care.\(^{34}\)

V. SLEEP NEEDS

During the last twenty years considerable research has been carried out on the many aspects of sleep. Consequently, sleep needs have become more predictable. Research into the nature of sleep has shown that sleep occurs in cycles of approximately eighty-five to ninety minutes in the young adult.\(^{35}\) During a total of about seven and one-half hours sleep the average adult has about four to six sleep cycles per night.\(^{36}\) A sleep cycle consists of two phases, the first of which is termed non-rapid eye movement (NREM) sleep, and the second of which is termed rapid eye movement (REM) sleep.

NREM sleep consists of four stages. Stage 1 is a light sleep from which a person may be easily woken. The sleep increases in depth with each stage and is deepest in stage 4. An adult goes from wakefulness to stage 1 when he

\(^{34}\) Ibid., p. 344.


falls asleep and then proceeds to stage 2, then to stage 3, and then to stage 4 over a period of around twenty to thirty minutes. The individual remains in stage 4 for around thirty minutes, after which time he moves back through the stages to stage 1 or 2. The individual then moves into a period of REM sleep which may last for ten to thirty minutes. At the end of the REM period the individual progresses from stage 1 or 2 to stages 3 and 4, thereby beginning another sleep cycle. 37

The character of the sleep cycle changes with the length of time the individual remains asleep. The majority of stage 3 and 4 sleep occurs during the first half of the night's sleep while the majority of REM sleep occurs in the last half of the night's sleep. 38 If, however, an individual is awakened, the sleep cycle is not resumed at the stage in which the interruption occurred but, rather, it begins again at stage 1. 39 Furthermore, when there has been a deficit of sleep, the missed NREM sleep is made-up before the missed stage 1-REM sleep. Also, it was noted by Garner and Mitchell that "people who are deprived of stage 1-REM sleep have difficulty in coping with recent stressful experiences." 40 Some of the behavioural changes manifested with stage 1-REM sleep deprivation are increased appetite, anxiety, irritability, and difficulty in concentrating. Stage 1-REM sleep depriva-

38 Ibid., p. 439.
39 Ibid., p. 442.
40 Ibid., p. 443.
tion is thought to occur when an individual sleeps at intervals of less than one hour or for a total of only three to four hours every twenty-four hours. 41

Writing on sleep needs during the maternity cycle, Williams drew attention to the fact that women may be in a state of acute sleep deprivation immediately following delivery. 42

VI. THE POSTPARTUM BLUES

In the few studies that have been done on the development of Postpartum Blues the scope has been limited. Hamilton commented on the inadequacy of the literature in this area. In his review of the literature Hamilton stated that in 1838 Esquirol suggested that the incidence of mental illness in the puerperium far exceeded the number of cases hospitalized. 43 Later in the nineteenth century others described a transitory mental illness in which there was confusion, excitement, and insomnia. This transitory mental illness, Hamilton said, was referred to as "milk fever" because its occurrence was observed to coincide with the beginning of milk flow. Moloney, in 1952, described a mild depression reaction of despondency, fatigue, inability to think clearly, and tearfulness in the first week postpartum. 44

41 Ibid., p. 442.

42 Barbara Williams "Sleep Needs During the Maternity Cycle," Nursing Outlook, XIV (February, 1967), 54.


44 Ibid., p. 108.
In 1955 Sclare reported that a high percentage of women expressed feelings of mild to moderate depression toward the end of the first postpartum week. Hamilton cited a study by Pleschete and others in 1956 which revealed that sixty percent of puerperal women reported some degree of depression at some time in the six-week period. Due to the shortcomings of the literature, Hamilton conducted an exploratory study undertaken to further delineate Postpartum Blues. The study showed lack of energy and fatiguability, episodes of crying, anxiety and fear, confusion, headaches, insomnia, worry about physical symptoms and states, and negative attitudes toward the husband.

Hamilton noted the similarity of the symptoms to the prodromal symptoms of the more severe puerperal depression. He suggested that severe insomnia is frequently an antecedent to puerperal depression. Yet insomnia was reported only occasionally by women in this study. Therefore, Hamilton suggested the possibility that the syndromes may be similar in cause and structure and that rapid recovery or deterioration may be determined by the ability or inability to sleep.

A study by Yalom and others showed a correlation of sleepless nights with high depression self-rating scores in the puerperium. The authors likewise postulated that some of the variables associated with postpartum depression

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45 Ibid.
46 Ibid., pp. 108-111.
47 Yalom and Others, op. cit., p. 20.
also correlate with Postpartum Blues. The variables cited in the study were low parity and high recurrence rate of Postpartum Blues. Other studies have also cited Postpartum Blues as a factor in the development of puerperal depression.

In addition to these factors the study by Yalom et al. showed other factors of past history related to the development of Postpartum Blues. The factors were greater distress of previous pregnancy, greater menstrual difficulties, lower age of menarche, irregularity of periods, and a shorter length of menstrual flow. The menstrual difficulties given were dysmenorrhea and premenstrual tension, each of which have been cited in another study as a factor in puerperal depression.

The occurrence of Postpartum Blues at a time when hormone levels are drastically changed is noted in the literature. Baker compared the mood changes of Postpartum Blues to the emotional instability occurring at puberty, in the pre-menstrual phase, and at the menopause, when major alterations in hormonal levels occur. Although reference to the likely relationship of hormone levels to mood is commonplace

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50 Yalom and Others, op. cit., p. 25.


52 Baker, op. cit., p. 34.
in the literature, no definitive studies to date have proved a relationship.

Referring to common emotional reactions in the puerperium, Baker suggested that hospital restrictions cause anxiety and frustration to build up so that when the mothers go home they experience reactions to these feelings. In a study by Larsen, lack of emotional support from nurses, doctors, and husbands during labour was cited as the most stressful feature of the hospital stay. During the puerperium at home, the stresses were reported as difficulty adjusting to the baby's needs, to housework routine, and to other children's needs, and to interference from members outside of the household, increased company, and worry over ability to cope with the family's needs.

Gordon, Kapostins, and Gordon reported a study which showed maternal role conflict and personal insecurity as factors related to abnormal emotional reactions to pregnancy and childbearing. Items related to conflict with maternal role were: no relatives available for help with baby care; differences in levels of education and occupation of the parents of the new baby and their parents; and the

53 Ibid., p. 41.
55 Ibid., p. 34-35.
husband often away from home. The personal insecurity items were primiparity; complications of pregnancy in the family history; the husband's father dead; the woman's mother dead; the woman's education incomplete; and no previous experience with babies. Illness during or apart from pregnancy were items related to both factors.

In another study, Larsen and Others listed social stress items as those cited and others used by Gordon and Gordon. Among the other items were unplanned pregnancy, inter-religious marriage, parents separated, and husband's parents separated. Additionally, two stress factors reported by Bibring were noted. These factors were a weak relationship between the woman and her male partner and a weak relationship between the woman and her mother.

VII. SUMMARY

This review of the literature was presented in five parts. The first part reviewed the literature which considered the puerperium as a developmental crisis. The puerperium was viewed as a stage of development, during which time certain tasks must be adequately achieved. The nature of the tasks to be achieved was seen to frequently constitute a crisis situation. The literature also pointed out that


58 Grete L. Bibring, "Recognition of Psychological Stress Often Neglected in O B Care" Hospital Topics, IL (September, 1966), 101-102.
professional assistance in the management of a crisis can improve the individual's strength and maturity.

The second part reviewed the literature which identified some of the many normal changes occurring in the puerperium. It was found that biophysical and psychosocial changes are profound, especially in the early puerperium. Environmental changes involved in adjustment to the hospital environment and routines, and then reintegration to a family with a new structure and an altered pattern of needs were shown to be great.

The third section reviewed the literature which dealt with some concepts of role theory. It was indicated that attainment of the maternal role is a process reached by sequential steps.

The fourth part reviewed the literature on sleep needs. Frequent interruptions of sleep or an inadequate amount of sleep was shown to be detrimental.

Finally, the literature reviewed in the fifth part examined factors relating to the Postpartum Blues. The many conflicts and needs created by the changing role of this period were shown to be prominent. However, the scarcity of research in the area pointed to the usefulness of a study to further examine some of the factors implicated in the development of Postpartum Blues.
CHAPTER III.

RESEARCH DESIGN AND DEVELOPMENT
OF THE STUDY

This study was conducted in the Greater Vancouver area of British Columbia using the descriptive method of research. Information pertinent to the study was gathered by means of the interview method of data collection. Because of the nature of the information required and the small sample size of the population, the interview seemed the most suitable method. Patient records were reviewed in the hospital from which the subjects were chosen. These records provided relevant medical history and demographic data.

Twenty-nine postpartum women were interviewed once in hospital and once in their usual places of residence.

I. SELECTION OF THE STUDY GROUP

The Setting

The subjects were chosen from the population of an obstetrics and gynecology hospital in the Greater Vancouver area following approval by the hospital administration.

A letter requesting permission to conduct the first part of the study in the hospital was sent to the Director of Nursing of that hospital, together with a summary of the proposed research. The letter requested permission to view patient records and to approach potential subjects.
The Subjects

The subjects selected were thirty-one postpartum women, sixteen of whom were primiparas and fifteen of whom were multiparas. No restrictions were placed on parity in order that Postpartum Blues could be studied in relation to whatever parity the sample included. Two primiparas were dropped from the study due to their hospitalization at and beyond the time when the home interview was scheduled.

The following criteria for eligibility to the study were applied:

Subjects must be willing to participate in the study. Two potential subjects who were approached showed some hesitance when invited to participate in the study and therefore were not included. The investigator considered that any hesitancy before agreement to participate in the study may reduce the commitment to correct information-giving, and to the second interview at home.

Subjects must speak fluent English, must have spent the last three years in Canada, and must be of Anglo-Saxon or similar ethnic origin. These criteria limited the sample population to a more homogeneous background. It was considered that vastly different background experiences among the subjects could influence the interpretability of the results of the study.

Subjects must have lived with the father of the new baby for at least two years. This criteria was directed toward selecting subjects whose marital or partner relationships were more likely to be stable.
The age of the subject must be between sixteen and thirty-five years. This criteria was set because of a higher incidence rate of both foetal and maternal complications under sixteen years and over thirty-five years of age.¹

Subjects must have had no major disease throughout the childbearing process, or any chronic handicapping disease, according to self-report. This criteria was set to avoid conflicting factors biasing the results of the study.

Subjects must have had a vertex-presenting vaginal delivery. For primiparas - within the time period of eighteen hours from the start of regular contractions ten minutes apart to the expulsion of the placenta, and for multiparas - twelve hours. The average duration of labour is considered to be about fourteen hours for primiparas and about eight hours for multiparas.² Outlet-forceps assistance in the delivery of the head was considered admissible. Also, episiotomies and first and second degree perineal lacerations were accepted. Beyond these limits extraneous factors again might bias the results of the study.

The newborn infants of subjects must show no evidence of illness or deformity and must equal or exceed the birth weight of six pounds. The infant’s medical history data were examined for this information. The Apgar Scores recorded at one and at five minutes after birth ranged be-


²Ibid.
tween eight and ten at each appraisal and the Pediatrician's assessment of each baby's condition was favourable.

In addition, subjects were required to sign a written consent form, a copy of which is included in Appendix A.

Initial Contact with the Subjects

Patient records were initially reviewed for eligibility of subjects for the study. The eligible subjects were then approached by the interviewer at a convenient time for the subjects and the hospital staff. The investigator then introduced herself by name and stated that she was a graduate student at the University of British Columbia and that she was conducting a study on mothers' feelings in the first six weeks following the birth of their babies. Confidentiality was explained. The potential subjects were also told that the study involved one interview in the hospital and one in the subjects' homes about three and one-half weeks later. Participation in the study was then requested of the postpartum women.

II. INSTRUMENTATION

A variety of instruments were used to obtain data in this study. Two semi-structured interview schedules, one for use in the hospital interview and one for use in the home interview, were developed. These were designed following a review of the literature and were intended to obtain information relevant to the research problem. The Beck Depression
Inventory, a standardized instrument to measure the degree of depression, was used in this study. Also, a questionnaire on Postpartum Blues was developed to obtain the self-perceptions of the subjects. The instruments used in this study are shown in Appendix B.

Each interview conducted in the hospital and in the subject's home took between thirty and seventy minutes to complete. To ensure anonymity, numbers were used to identify data rather than the names of the subjects.

Hospital Interview Schedule

Some of the questions in this schedule were included to obtain background information. Such questions concerned place of residence, marital status, parity, expected date of confinement, sex of baby, and drugs administered while in the hospital.

Some questions were used to obtain data to ensure that respondents met the criteria of eligibility to the study. These questions concerned age, nationality, and length of time in Canada, history of any major illness or psychiatric disorder, length of time lived with partner, confinement date and time, length of labour, condition of perineum, weight of baby and Apgar Score of baby, and current health status of the respondent and of her baby.

Other questions were used to obtain information in regard to factors mentioned in the literature as implicated in the development of Postpartum Blues. To provide information to assist in answering question 1 (conflict with mater-
nal role) of the study questions on factors likely to cause role-conflict included: the marital status, residence, education, and occupation of the parents of the respondent and the parents of her husband; the respondent's early expectation of motherhood; the number of children at home and the age of the youngest child; the incidence of any physical or emotional problems with any previous childbearing or with the pregnancy, labour, and birth just concluded; any problems in childbearing experienced by the respondent's immediate female relatives; the amount of educational preparation for childbirth; concerns experienced during this pregnancy, labour, or birth, the amount of time the husband is away from home overnight; expectations regarding the labour and birth experience; the presence of the husband during the labour and birth process; self-perceptions of significant aid during the labour and birth process; and infant feeding style.

To provide information to answer question II (endocrine factors related to the menstrual cycle) of the study questions of menstrual history and length of time trying to conceive were included.

Finally, to provide information to assist in answering question III (reduction in sleep cycles) of the study questions on sleep were included.

This schedule was verbally administered by the investigator.

Home Interview Schedule

This schedule was prepared to collect data to assist
in answering two questions asked in the study. Questions asked to provide information for question I (conflict with maternal role) included concerns about the baby, adjustment difficulties, and extra help; relationship with mother and husband; feelings of happiness, recent memory, distractability, and concentration power, feelings of dependency, blocked goals, and entrapment. These questions were structured in a similar manner to those in the Beck Depression Inventory, as was the ordering of the questions. The reason for this was that the respondent was asked to answer the Beck Depression Inventory immediately following the verbal administration of the schedule. The same format for both was used to facilitate the respondent's task of selecting the most appropriate answer. Questions regarding sleep provided information for question III of the study.

The Beck Depression Inventory

This instrument facilitates the recognition of a person who is depressed. The inventory was developed to quantitatively assess the degree of depression based on characteristic symptoms and attitudes established in the literature. The inventory consists of twenty-one categories of symptoms and attitudes, each of which describes a particular behavioural manifestation of depression. The symptom-attitude categories include mood, guilt, pessimism, self-accusation, social withdrawal, and others.

Each category contains four questions which have numerical values ranked in order of severity from zero to three. Beck's statistical tests showed the instrument to be
valid and reliable. The inventory was used in a study of postpartum mood change in Jamaican women in 1972. Aitken and Zealley confirmed the validity of the Beck instrument, and more recently, Furnell proved it to be an accurate aid.

The questions on weight loss were considered unsuitable for use with postpartum women because of the weight loss normally occurring in this period. Therefore, four questions were substituted for the original ones. It was intended to analyze these questions on weight separately to detect any differences that may have resulted from the substitution. However, in view of the insignificant findings of the inventory, separate analysis was not done.

The Blues Questionnaire

This was an open-ended questionnaire to elicit the self perception and knowledge of subjects concerning Postpartum Blues. The data obtained from this questionnaire was useful in assessing the degree of distress felt by those who experienced the Postpartum Blues. The omission of the first two questions and the addition of another two questions was


made for the home interview. The modified Blues Questionnaire is shown in Appendix B.

III. PRE-TEST

The instruments used were reviewed by a nurse-educator in the maternal-child area, a nurse-educator in the research area, and a psychologist engaged in nursing research. Several adjustments were made to reduce ambiguity. The instruments, with the exception of the Home Interview Schedule, were administered to two subjects in the same hospital in which the study was conducted. A few further adjustments were made for the purpose of clarity. The Home Interview Schedule was administered to two postpartum women in their own homes in the Greater Vancouver area. Likewise, a few adjustments were made to the schedule to reduce ambiguity.

The use of the pretest, as suggested by Abdellah and Levine, increased the validity and reliability of the data-collecting instruments. Moreover, the pretest enabled the investigator to gain some proficiency in the use of the instruments.

The Blues Questionnaire was additionally pretested on twelve postpartum women in their first ten days at home. The questionnaire was administered by nursing students in the baccalaureate program of the University of British Columbia.

No changes were made as the instrument seemed to obtain the required information.

IV. THE INTERVIEWING PROCEDURE

The hospital interview was conducted during the afternoon, excluding the times that meals were served, babies were being fed, visitors were present, nursing treatment was in progress, or the subject was otherwise engaged. The Hospital Interview Schedule was verbally administered, except for the data which was obtained from the patient record. At the conclusion of the interview the subject was given the investigator's name in writing, her telephone number, and the date agreed upon for the home interview. It was stated that the investigator would telephone the subject on the day prior to the interview to establish the time of the interview.

Any questions the subject had were discussed and then the Beck Depression Inventory and Blues Questionnaire were given to the subject. The subject was instructed in the use of the self-report instruments. The investigator later collected the instruments and thanked the subject for her assistance.

The Home Interview Schedule was used in the home interview. The first part was administered verbally by the investigator and the second part was self-administered by the subject, along with the Beck Depression Inventory. The Blues Questionnaire, revised for the home interview, was then administered verbally. Any questions were discussed. The subject was again thanked for her participation and told
that a summary of results of the study would be mailed on completion of the study. Each subject had previously request-
ed a summary of the results of the study.

**Interactions With the Study Group**

During the time available to the investigator for collection of the data, only two subjects of the potential study population were not included in the study. Most of the remaining thirty-one subjects who initially formed the study group openly expressed their desire to be of assistance to the investigator in order that the study might help future mothers. The remainder of the study group indicated their willingness to cooperate by asking questions about the study. Approximately two-thirds of the group were in rooms containing two or more beds. A separate interviewing site was offered, but the subjects all suggested that they remain in their own rooms, as they were not concerned about confidentiality. As this was less disruptive to the functioning of the unit, the suggestion was readily accepted. There were no indications that a possible reduction in confidentiality in any way restricted the content of the information requested.

Up to one hour was allowed for each interview and where possible the time for the interview was scheduled on the day prior. It was discovered that postpartum women in hospital rarely have much time that can be guaranteed free of interruptions. Consequently, the investigator's appointment system became extremely flexible. Establishment of rapport was facilitated by the presence of flowers and cards
in the rooms or the forthcoming Christmas season. It was also observed how eager postpartum women are to discuss the recent events encompassing the birth of the baby. Attention to this need was preferably given at the conclusion of the administration of the Hospital Interview Schedule. However, on a few occasions the order of the schedule was foregone in order to deal with the content the subject urgently wished to express.

Any requests for advice were discussed. When the investigator gave information the respondent was encouraged to form her own conclusions rather than to accept a ready-made decision. Several of the questions asked could be best answered by the respondent's physician and the suggestion was made to that effect.

On telephoning the respondents at their homes, without exception, they all said that they had been expecting the call. Times were arranged for the visits and for some places directions for best routes of access to the location were obtained. Most of the visits lasted between forty-five and seventy minutes, although the interview instruments required only twenty to twenty-five minutes to complete. The respondents displayed a need to discuss home activities and future plans.

Of the two respondents eliminated from the study, one remained under psychiatric care in hospital at seven weeks after confinement. The husband reported taking his wife to hospital three weeks after confinement because of manic behaviour. The second respondent eliminated from the study
was also admitted to a psychiatric unit three weeks after confinement because of manic behaviour. This woman was discharged from the unit after two weeks of hospitalization. The investigator telephoned to enquire how the woman was managing at home and visited once at the woman's request. No unusual behaviour was noted. The woman spoke freely of her thoughts and feelings during the manic state experienced and described some of her activities. The investigator informed the woman about the Postpartum Counselling Service in Vancouver, and gave her a pamphlet describing the services offered.

V. STATISTICAL ANALYSIS

Responses for each item of the data which was cited in the literature as influencing the development of Postpartum Blues were divided into "yes" and "no" categories. Then the two categories for each item were compared to the incidence of Postpartum Blues by means of the Chi-square test.

The chi-square test is a non-parametric test of significance based on the chi-square distribution and used when the size of the study population is small.\(^7\) The value provided by the computation of chi-square is a measure of the probability of obtaining the value by random sampling.\(^8\) The minimum significance level was set at \(\leq .05\).

\(^7\) Abdellah and Levine, op. cit., p. 350.
\(^8\) Ibid.
VI. SUMMARY

This chapter outlined the descriptive method of research used for this study and the interview method used to gather information required for the study. The selection of the study group was described. The instruments which were developed for the study and the Beck Depression Inventory were described. The pre-test and the interviewing procedure were described. Finally, the method of statistical analysis was described.
CHAPTER IV.

ANALYSIS OF THE DATA

Characteristics of the study population are described and shown in frequency distribution tables. The incidence of Postpartum Blues in the study population was assessed. Further analysis of the data was carried out to answer the questions asked in the study.

Thus the data were examined to provide information concerning the incidence of factors related to maternal role conflict, certain difficulties related to the menstrual cycle and sleep deficiencies. These data were then compared with the incidence of Postpartum Blues in the study population. The chi square test was used to detect any significant difference between the two groups. Descriptive analysis and frequency distributions were used in the analysis of these data.

I. CHARACTERISTICS OF THE STUDY POPULATION

The study population consisted of twenty-nine postpartum women who had given birth to apparently healthy full-term infants at a selected hospital during the month of December. The age, birth-place, education, and length of time lived with the father of the baby were characteristics of the study population described and tabulated. The remaining characteristics are described and shown in relation to the incidence of Postpartum Blues. Chi square tests showed no significant differences.
Age

The ages of the women ranged from twenty to thirty-five years, with a mean average of twenty-six years and four months. Table 1 illustrates this information.

Table 1
Percentage Distribution of the Study Population by Age

<table>
<thead>
<tr>
<th>Age</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-24 years</td>
<td>8</td>
<td>28</td>
</tr>
<tr>
<td>25-29 years</td>
<td>17</td>
<td>58</td>
</tr>
<tr>
<td>30-35 years</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>TOTAL</td>
<td>29</td>
<td>100</td>
</tr>
</tbody>
</table>

Birthplace

The majority of the study population (80 percent) was born in Canada. Two women (7 percent) were born in Great Britain; two women (7 percent) were born in Holland; one woman (3 percent) was born in Denmark, and one woman (3 percent) was born in the United States of America, as shown in Table 2.

Table 2
Percentage Distribution of the Study Population by Birthplace

<table>
<thead>
<tr>
<th>Birthplace</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>23</td>
<td>80</td>
</tr>
<tr>
<td>Great Britain</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Holland</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Denmark</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>United States of America</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>29</td>
<td>100</td>
</tr>
</tbody>
</table>
Marital Status

Twenty-seven (93 percent) of the women in the study group were married. The remaining two (7 percent) were living in a stable common-law relationship. The range in the length of time lived with the father of the newborn infant was from two years and six months to ten years as illustrated in Table 3. The mean average length of time was four years and nine months.

Table 3
Percentage Distribution of the Study Population by Length of Time Lived with Father Of Newborn Infant

<table>
<thead>
<tr>
<th>Time</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-4 years</td>
<td>19</td>
<td>65</td>
</tr>
<tr>
<td>5-7 years</td>
<td>8</td>
<td>28</td>
</tr>
<tr>
<td>8-10 years</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>29</td>
<td>100</td>
</tr>
</tbody>
</table>

Education

The level of educational attainment ranged from Grade ten to a University degree as shown in Table 3. Five women (17 percent) had not completed high school, fourteen women (48 percent) had graduated from high school, four women (14 percent) had some post-high school training, while six women (21 percent) were university graduates.
Table 4

Percentage Distribution of the Study Population by Highest Educational Attainment

<table>
<thead>
<tr>
<th>Level Completed</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade X or XI</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>High School</td>
<td>14</td>
<td>48</td>
</tr>
<tr>
<td>Some Post High School Training</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>University Degree</td>
<td>6</td>
<td>21</td>
</tr>
<tr>
<td>TOTAL</td>
<td>29</td>
<td>100</td>
</tr>
</tbody>
</table>

Occupation

All of the women except one had been employed following completion of their education. Nevertheless, all of the women stated that they had no intentions of seeking employment for at least one to two years following the birth of their infants.

Parity

Parity was classified into four categories: primiparity, multiparity with no other child at home, multiparity with one child at home, and multiparity with two children at home. There were fourteen women (forty-eight percent) in the first category, 3 women (10 percent) in the second category, ten women (35 percent) in the third category, and two women (7 percent) in the last category. Table 5 shows this information dichotomized
into those who experienced Postpartum Blues and those who did not.

Table 5
Parity by Incidence of Postpartum Blues in the Study Population

<table>
<thead>
<tr>
<th>Parity</th>
<th>Postpartum Blues No Postpartum Blues</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
</tr>
<tr>
<td>Primipara</td>
<td>8</td>
</tr>
<tr>
<td>Multipara - no other child</td>
<td>3</td>
</tr>
<tr>
<td>Multipara - 1 other child</td>
<td>7</td>
</tr>
<tr>
<td>Multipara - 2 other children</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
</tr>
</tbody>
</table>

Confinement Date

The proximity of the confinement date to the estimated confinement date varied between seventeen days early and seventeen days late. Of the women who delivered their infants one to seven days early six developed Postpartum Blues while five did not develop the episode, and of those who delivered their infants eight to seventeen days early one developed Postpartum Blues while two did not develop the episode. However, of the women who delivered their infants one to seven days late, eight developed Postpartum Blues while one did not develop the episode, and of those who delivered their infants eight to seventeen days late five developed Postpartum Blues while one did not. Al-
though the difference was not significant when the chi square test was used, the discrepancies are probably best explained by the fact that the majority of the hospital interviews were conducted before Christmas Day. The women who were confined after their expected date all stated that they were anxious to be home before Christmas Day. The women also expressed their disappointment over the extension of their pregnancies beyond their expected dates of confinement as they were tired of the pregnant state. The information on confinement dates is shown in Table 6.

Table 6
Proximity of Confinement Date to Estimated Confinement Date by Incidence of Postpartum Blues in the Study Population

<table>
<thead>
<tr>
<th>Difference In Time</th>
<th>Postpartum Blues Number</th>
<th>No Postpartum Blues Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 7 days early</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>8 - 17 days early</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1 - 7 days late</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>8 - 17 days late</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
<td>9</td>
</tr>
</tbody>
</table>

Duration of Labour

The duration of labour for primiparas varied from three hours and forty-five minutes to fourteen hours and ten minutes, with a mean average time of ten hours and eleven minutes. This was almost four hours shorter than
the average quoted in the literature.\textsuperscript{1} Of the primiparas studied one had a labour of less than five hours duration, nine had a labour of between five and ten hours duration, and four had a labour of between ten and fifteen hours, as shown in Table 7.

The duration of labour for multiparas varied from one hour and thirty minutes to eleven hours and thirty-five minutes, with a mean average time of five hours and forty-five minutes. This average time also was considerably less than the average of eight hours quoted in the literature.\textsuperscript{2} Of the multiparas studied five had labours of less than five hours, nine had labours of between five and ten hours, and one had a labour of between ten and fifteen hours. This information is also illustrated in Table 7.

<table>
<thead>
<tr>
<th>Duration of Labour</th>
<th>Postpartum Blues Primiparas</th>
<th>Postpartum Blues Multiparas</th>
<th>No Postpartum Blues Primiparas</th>
<th>No Postpartum Blues Multiparas</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 5 hours</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5 - 10 hours</td>
<td>6</td>
<td>7</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>10 - 15 hours</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>8</td>
<td>12</td>
<td>6</td>
<td>3</td>
</tr>
</tbody>
</table>


\textsuperscript{2}Ibid.
Medication

Analgesic drugs administered during labour were predominantly Demerol, Phenergan and Lidocaine. Eighteen women (62 percent) received 50, 75, or 100 milligrams of Demerol intramuscularly. Two women (7 percent) had the dose repeated once. In addition to Demerol three women (10 percent) were given 100 milligrams of Seconal orally during the first stage of labour. Nine women (31 percent) received either 25 or 50 milligrams of Phenergan intramuscularly, separately or in conjunction with Demerol. One woman (3 percent) had the dose repeated once. Twenty-six of the study group (90 percent) received injections of Lidocaine into the lumbar epidural space outside of the dura mater in the spinal canal to effect regional anaesthesia. One woman (3 percent) received an injection of Lidocaine into each pudendal nerve by way of the vagina, also to effect regional anaesthesia. Nitrous oxide and Pentrane inhalation anaesthetic were used to provide analgesia for one woman (3 percent). One woman did not receive any form of analgesia owing to a short labour and an intact perineum. While in the case-room all of the women were given an oxytocic drug to stimulate uterine contractions after delivery of the baby in order to prevent excessive blood loss. Also two women (7 percent) who planned not to breast feed were given an intramuscular injection of Lactostat to suppress lactation and thereby reduce the possibility of breast engorgement.
Following delivery nineteen women (66 percent) accepted Seconal 100 milligrams orally to enhance sleep on their first postpartum night, while ten women (34 percent) declined sedation. Six women (21 percent) took Seconal on their second postpartum night, five women (17 percent) on their third night and one woman (3 percent) on her fourth postpartum night in hospital. Other oral medications given during the postpartum hospital stay were Frosst's 292's, Darvon Compound, Tandearil, Ergometrine, and Stilboestrol. Frosst's 292's or Darvon Compound were ordered by most of the attending physicians, either four-hourly or six-hourly as required for the relief of pain from perineal sutures, "after-pains," or breast engorgement. Twenty-one women (72 percent) took between one and fourteen doses of Frosst's 292 tablets and two women (7 percent) took one and thirteen doses of Darvon Compound capsules respectively. One woman (3 percent) received Ergometrine tablets three times daily for three days to aid involution of the uterus. One woman (3 percent) received Stilboestrol tablets three times daily for four days to aid suppression of lactation. Finally, one woman received Tandearil three times daily for four days for joint-pain relief. No significant differences in relation to medication and incidence of Postpartum Blues in the study population were found.

Episiotomy

Twenty-five women (86 percent) in the study group had episiotomies repaired with sutures. The remaining four women (14 percent) had intact perineums.
Birth Weight

The birth weights of the infants ranged between six pounds and nine pounds six ounces. Seven infants (24 percent) weighed between six and seven pounds, fourteen infants (49 percent) weighed between seven and eight pounds, seven infants (24 percent) weighed between eight and nine pounds, while one infant (3 percent) weighed between nine and ten pounds. Table 8 shows this information compared with the incidence of Postpartum Blues.

Table 8

Birth Weight of Infants by Incidence of Postpartum Blues in the Study Population

<table>
<thead>
<tr>
<th>Birth Weight</th>
<th>Postpartum Blues</th>
<th>No Postpartum Blues</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-7 pounds</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>7-8 pounds</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>8-9 pounds</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>9-10 pounds</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
<td>9</td>
</tr>
</tbody>
</table>

Health Status

The health status of each mother and infant was checked by the written medical record and by asking the mothers.

II. ASSESSMENT OF THE INCIDENCE OF POSTPARTUM BLUES

Data provided by the Blues Questionnaire revealed
that all women had heard of Postpartum Blues and all had some ideas about the phenomenon. Eleven of the twenty women who later reported having experienced Postpartum Blues thought that the episode was a depression state while all of the nine women who later reported not having experienced Postpartum Blues thought that the episode was a depression state. Therefore, the assumption that women were capable of self-reporting the incidence of Postpartum Blues was considered acceptable for this study.

The information concerning Postpartum Blues collected from the twenty women who experienced the episode was classified and examined. Reasons given for the development of Postpartum Blues were predominantly fatigue. Nine women cited fatigue, four women cited anxiety, three women cited body adjustments, one woman cited hormones, and one woman cited change in lifestyle. The effects of Postpartum Blues were reported as fifteen instances of depression, four instances of intolerance, frustration, or irritability, one instance of anxiety, and one instance of oversensitivity. Most of these effects were reportedly accompanied by short crying spells. However, five women reported the effects of Postpartum Blues as crying only. The crying spells reported were brief, lasting from two to fifteen minutes, with the exception of two spells which lasted thirty and sixty minutes respectively. These results are similar to those reported by Yalom and others.²

The time of occurrence of Postpartum Blues was within two weeks of confinement in all but one case which extended into the third week. Ten women experienced Postpartum Blues while in hospital and seventeen women experienced Postpartum Blues after returning home. Accordingly, seven women experienced the episode twice, three women only in hospital, and ten women only at home. Unfortunately, most of the women who experienced Postpartum Blues at home were unable to recall the exact date of occurrence. Therefore, inferences about whether or not the occurrence of Postpartum Blues was a continuation of the episode in hospital or a discrete episode in seven women can only be speculative.

The duration of Postpartum Blues experienced by the women while in the hospital differed from that experienced at home. The duration of Postpartum Blues reported while in the hospital varied from less than one hour for two women to two days for two women. Four women reported the duration to be four to six hours and the remaining two women reported it to be one day. However, the duration of Postpartum Blues at home was reported to be from one hour for three women to up to fourteen days intermittantly for one woman. Two women reported the episode to last from four to six hours, one woman for one day, seven women for two to three days intermittantly, and two women for four to seven days intermittantly. The difference in the two duration times might be due to the fact that there were potentially more people available for social interaction and that there was only partial respon-
sibility for the baby in the hospital. Also to be taken into account is the social desirability norm of being a "good patient", as suggested by Baker.\(^3\)

With regard to assistance in overcoming Postpartum Blues, seven of the ten women who experienced the episode while in hospital reported that no one helped them. One woman reported that her husband and a nurse helped her, one woman reported that the nurses helped her, and one woman reported that a relative helped her. This finding may well indicate postpartum women's need for emotional assistance while in the hospital as claimed by Auerbach and also by Fielding.\(^4\) Of the seventeen women who experienced Postpartum Blues at home, ten reported significant assistance from their husbands, four reported assistance from a relative or friend and only three reported no assistance. The duration of Postpartum Blues for two of these three women was one hour, while that of the third woman was one day. However, the finding of the need for emotional support at home in the early puerperium is consistent with the claims of Auerbach and Rice.\(^5\)

Postpartum Blues was considered unpreventable.


by thirteen of the seventeen women who experienced the episode. Two women thought that adequate rest and relaxation would preclude the development of Postpartum Blues and two women were uncertain but thought a "positive attitude" may affect the outcome.

Postpartum Blues was not considered to be a bad experience by eleven of the study group who developed the episode. Four women considered the episode to be unpleasant but stated that it was a learning experience; one woman considered it to be an unpleasant experience but forgettable, and one woman considered it to be a bad experience because of guilt feelings over her initial disappointment with the sex of her infant. At the same time, this woman stated that she had resolved her guilt feelings and the Postpartum Blues did not have a lasting effect. These findings were somewhat unexpected by the investigator whose experience with postpartum women indicated that the event of Postpartum Blues was often long-remembered with negative feelings. A possible explanation might be that the incidence of Postpartum Blues associated with prolonged negative feelings is low and that a much larger population would be needed to reveal it. Or it might be that the selection criteria eliminated those women most likely to be left with strong negative feelings after the event of Postpartum Blues. Yet another explanation might be that the postpartum women previously reporting to the investigator long-lasting negative feelings subsequent to Postpartum Blues had indeed not experienced Postpartum Blues, but had suffered an undetected
Postpartum Depression. On the other hand, the findings are consistent with those of two other studies.6

The Beck Depression Inventory did not prove to be a useful measure in predicting the development of Postpartum Blues in the women at home on the basis of their total score on the inventory administered at the hospital interview. All but one of the women's total scores on the inventory administered while in hospital were between zero and thirteen, the non-depressed category. The total scores of the twenty-six women were divided into two groups—those below seven and those from seven to fourteen. The scores were then compared to the incidence of Postpartum Blues, both in the hospital and at home. The chi square test showed no significant differences. One woman had a total score of seventeen in the hospital and she experienced Postpartum Blues both in the hospital and at home. The Beck Depression Inventory scores provided by the home interview were not reflective of the incidence of Postpartum Blues in the women at home. When compared to the inventory scores provided at the hospital interview the home inventory scores exceeded the hospital inventory scores in nine instances. None of the scores on the home inventory was greater than nine.

In view of these findings the Beck Depression Inventory did not prove useful in predicting mild, transitory states of depression. Regarding moderately depressed states

6 Brice Pitt, "'Maternity Blues,'" British Journal of Psychiatry, CXX (1973) 433; Yalom and Others, loc. cit.
there was only one woman whose hospital inventory score was in this category. This woman developed Postpartum Blues in the hospital and at home. Furthermore, the duration of Postpartum Blues for this woman was three to four days, intermittently. Also this woman reported that feelings consequent to the Postpartum Blues experience were that it was a "thoroughly unpleasant" experience. It might well be that the Beck Depression Inventory would consistently differentiate between postpartum women who are moderately or highly depressed and those who are non-depressed or mildly depressed.

III. INCIDENCE OF STRESS ITEMS RELATED TO MATERNAL ROLE CONFLICT

Data provided by the interview schedules showed that all of the study population reported some stress items related to maternal role conflict. The frequencies of each item were categorized according to the incidence of Postpartum Blues. The chi square test was then used for each item to determine the significance of the difference between the group who experienced Postpartum Blues and the group who did not experience Postpartum Blues. The items were tabulated in the manner described and under the headings of: inadequate preparation for maternal role; anxiety about maternal role; conflict with other roles and distressing events during the puerperium; inadequate help or support from significant other persons; and emotional and cognitive changes.7

There was no significant difference at the .05 level for any of the items.

Further to this, each stress item related to maternal role conflict was assigned a value of one and totals were made for every woman in each of the five groups under the headings described above. These scores were then tabulated according to the incidence of Postpartum Blues, for example:

Number of emotional and cognitive changes

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

number of women who developed Postpartum Blues

<table>
<thead>
<tr>
<th></th>
<th>4</th>
<th>4</th>
<th>1</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

number of women who did not develop Postpartum Blues

The chi square test was used to test for significant differences in each of the five groups. There were no significant differences at the .05 level.

Finally, all of the stress items of the five groups were totalled for each woman, then divided into three categories of 1-5 items, 6-10 items, and 11-15 items. The categories were then classified into Postpartum Blues and no Postpartum Blues and the chi square test was used to test for significant differences. Again, there were no significant differences at the .05 level.

Inadequate Preparation for Maternal Role

The mothers of all the women in the study group were alive. Two women were raised by adoptive parents who,
for the purposes of this study, were regarded for most items as their own parents. Six women had parents who lived independently of each other. Four of these women experienced Postpartum Blues while two did not experience Postpartum Blues. Ten of the women had husbands whose fathers were dead. Seven of these women developed Postpartum Blues compared with three who did not. One woman's husband had parents who were living separately. Table 9 illustrates this information.

With regard to education, five women had less than a high school graduation and all five women experienced Postpartum Blues. This finding, although not significant, was perhaps due to the small size of the population. The fact that all of the women whose educational attainment was less than high school completion developed Postpartum Blues might support findings reported in two studies. The findings of those two studies were that less than completion of high school education represents a stress factor in postpartum emotional adjustment. Fourteen women had a higher education than their parents and ten of these women experienced Postpartum Blues while four did not experience Postpartum Blues. The husbands of thirteen women had a higher education than their parents. Of these thirteen women, eleven experienced Postpartum Blues and four did not experience Postpartum Blues. The husbands of eleven women had a higher education than their wife's parents; nine of these women

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experienced Postpartum Blues while two did not experience Postpartum Blues. This information is shown in Table 9.

In relation to occupation six women's husbands had a higher occupation than their parents and all of these women experienced Postpartum Blues. While this finding was not significant the lack of significance may be due to the small size of the population. Certainly the finding is suggestive of support for the findings of a study reported by Gordon, Kapostins, and Gordon. That study showed that when the husband's occupation was higher than that of his parents it constituted a stress factor in postpartum emotional adjustment. However, the finding of all six women developing Postpartum Blues may be entirely by chance. Four women's husbands had a higher occupation than the women's parents. Three of these women experienced Postpartum Blues while one did not experience the episode. Table 9 shows this information.

Regarding religion there were five women who had an interreligious marriage. All of these women experienced Postpartum Blues. In four instances one partner was reared in the Roman Catholic Church and one in the Protestant faith. Although this finding was not significant it is possible that the small size of the population may account for this. That all five women developed Postpartum Blues might well be a coincidence. On the other hand, it might support the find-

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9Gordon, Kapostins, and Gordon, op. cit., p. 162.
ings in a study report by Landis. The Landis study showed that marriages between Catholics and Protestants involve more hazards that do those between members of one faith.

Table 9

<table>
<thead>
<tr>
<th>Item</th>
<th>Postpartum Blues</th>
<th>No Postpartum Blues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Husband's father dead</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Parents separated</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Husband's parents separated</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Education less that high school</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Education higher than parents</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Husband's education higher than his parents</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Husband's education higher than wife's parents</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Husband's occupation higher than his parents</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Husband's occupation higher than wife's parents</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Interreligious marriage</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>

Anxiety about Maternal Role

Only two women had not always expected to become mothers. Both of these women experienced Postpartum Blues.

All but one of the women claimed to have a very good relationship with their mothers. The excepted woman, who responded that she did not get along with her mother very well, experienced Postpartum Blues. Because of the value that society places on having a good relationship with one's mother this finding can not be convincing without a measurement of social desirability. It could be that more than one woman had a less than adequate relationship with their mothers. On the other hand, it could be that during the recent pregnancy, or a previous pregnancy the women had reminisced and resolved any past conflicts in their relationships with their mothers in the process of maternal role attainment described by Rubin.11

All but two women claimed to have a very close relationship with their husbands. The excepted two women, who responded that their relationship with their husbands was alright, both experienced Postpartum Blues. Again, this finding may in part represent social desirability rather than actuality. However, the fact that twenty-eight women reported that their husbands gave considerable assistance with baby care and household duties does support this finding.

In the study population there were fourteen primiparas and three multiparas who had given birth to one infant but who had no infant care experience in relation to that infant. Of these seventeen women, eleven experienced Postpartum Blues while six did not experience the episode. The six women who did not experience Postpartum Blues were all primiparas. Therefore, the number of primiparas who experienced Postpartum Blues was lower than that expected. Even including the three multiparas mentioned, fewer of the women engaged in their first own baby-caring experience developed Postpartum Blues than did the multiparas with other children. Table 10 shows this information.

This finding, then, is in contradiction to the findings of other studies which show that more primiparas than multiparas experienced difficulty in postpartum adjustment.\(^{12}\) Perhaps this is by chance, in view of the small study population. On the other hand, this population may have had fewer stress factors than had the populations of the other studies. Those study populations were larger, were more heterogeneous in nature, and were residents of cities in the United States of America. Then again, in this study all but one of the seventeen women engaged in their first own baby-care experience had attended prenatal classes.

Only one woman had experienced a previous physical problem with childbirth and this was a threatened immature delivery at twenty-four weeks gestation. This woman experi-

Excluding the two women with adoptive parents for whom there was no information available, seven women had mothers or sisters who had experienced problems in childbearing. Five of these women developed Postpartum Blues while two did not develop Postpartum Blues. This is shown in Table 10. Again, in view of the small numbers, this finding is hard to interpret. However, the finding is not inconsistent with the finding of twenty percent reported by Larsen and Others.13

Of the seventeen primiparas and multiparas with no previous own baby-care experience, three primiparas had no previous experience with baby care. These three women developed Postpartum Blues. Once again, this finding cannot be interpreted because of the small size of the study population. However, the finding does suggest that no previous experience with baby care is a factor in Postpartum Blues. Larsen and others reported that little or no previous child-care experience occurred in sixteen percent of those with postpartum emotional difficulties in a study in 1968.14

All but one of the seventeen women with first babies attended prenatal classes. The excepted woman experienced Postpartum Blues. Of the fifteen multiparas, eight attended prenatal classes while carrying the present infant and the remaining seven women attended prenatal classes with their

13Larsen, op. cit., p. 25.
14Ibid., p. 23.
last pregnancy. Of these seven women, five experienced Postpartum Blues while two did not experience the episode. Inferences cannot be made from these findings because of the small numbers and because of insufficient data about the amount of information the multiparas remembered from previous prenatal classes.

Regarding anxiety during pregnancy about labour and delivery eleven women reported a little concern and four women reported a lot of concern. Seven of the eleven women who were slightly concerned experienced Postpartum Blues while four did not experience the episode. All four women who were highly concerned during pregnancy about labour and delivery experienced Postpartum Blues. Table 10 shows this information. These findings, while suggestive of a relationship between Postpartum Blues and concern about labour and delivery were not significant. Nevertheless, the direction of the tendency is in contrast to the findings of the study by Larsen in which stresses during pregnancy showed little or no predictive value for postpartum stress.\(^\text{15}\)

In relation to expectations about labour and delivery, eleven women expected their labour and deliveries to be easier than they were. Of these eleven women, eight experienced Postpartum Blues and three did not experience the episode. Five women expected their labours and deliveries to be about the same as they were and none of these

women experienced Postpartum Blues. The remaining thirteen women expected their labours to be harder than they were. Seven of the thirteen women experienced Postpartum Blues while six did not experience the episode. Table 10 illustrates this information.

Table 10

Incidence of Stress-Items Related to Maternal Role Conflict--Anxiety About Maternal Role--by Incidence of Postpartum Blues in the Study Population

<table>
<thead>
<tr>
<th>Item</th>
<th>Postpartum Blues</th>
<th>No Postpartum Blues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primipara or multipara with no children</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Mother or sister had problems with childbearing</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>No previous experience with babies</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>A few concerns during pregnancy about labour and delivery</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>A lot of concerns during pregnancy about labour and delivery</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Expected labour to be easier than it was</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Changed infant from breast to bottle feeding</td>
<td>7</td>
<td>3</td>
</tr>
</tbody>
</table>

Only two women had a few concerns about baby care during their pregnancies and both women experienced Postpartum Blues. However, twelve women had a few concerns and one woman
a lot of concerns about baby care after confinement and while still in the hospital. Eight of the twelve women with a few concerns developed Postpartum Blues while four did not develop Postpartum Blues. The one woman with a lot of concerns developed Postpartum Blues. Of the sixteen remaining women who reported no concerns whilst in hospital eleven women developed Postpartum Blues while five did not develop Postpartum Blues. Eleven of the thirteen puerperal women in hospital who had concerns about baby care were primiparas or multiparas with no children at home. The fact, then, that more of these women did not experience Postpartum Blues might indicate that the concerns were preparatory to the forthcoming maternal role at home rather than conflict with maternal role.

Only four women had slight concern about their babies at home and in each case the concern was regarding the baby's "wind" pains. Three of these women experienced Postpartum Blues at home while one did not.

Thirteen women began breastfeeding their babies initially while in the hospital and were continuing one month later. Eight of these women experienced Postpartum Blues while five did not. Six women began bottle feeding their infants initially while in the hospital, five of whom experienced Postpartum Blues while one did not experience the episode. The remaining ten women began breastfeeding initially while in the hospital but changed to bottle feeding within one month. Seven of these women developed Postpartum Blues while three did not develop Postpartum Blues.
This information is shown in Table 10.

The reason for the changes and the time following birth of the changes are as follows: five women stopped breastfeeding because of inadequate milk supply, four between six and ten days and one at twenty-eight days; one woman had inverted nipples which became cracked and she changed the style of infant feeding at four days; one woman desired her husband to share in the feeding and to give her relief with feeding at night, and she changed the feeding style at nine days; one woman had a breast abscess and she changed the feeding style at ten days; one woman's infant was allergic to breast-milk and was changed to formula at nine days; and finally one woman had complications following the epidural anaesthesia given during labour, and her baby was changed to formula at six days.

Conflict with Other Roles and Distressing Events During The Puerperium

Seven women had unplanned pregnancies. Five of these women experienced Postpartum Blues while two did not experience the episode. Although no conclusions can be drawn from this insignificant finding, it is interesting to note that two of these women who experienced Postpartum Blues reported a lot of concerns about labour and delivery during their pregnancies and one woman reported a few concerns. Such a finding on a larger scale might lend support to the claim by Rice that "those with the more serious problems about labour and delivery were the ones who had poor personal and social adjustments and who had not planned their preg-
Of the eight women who had previously experienced Postpartum Blues, six experienced the episode again while two did not experience it. Three of the remaining four multiparas who had not previously experienced Postpartum Blues developed Postpartum Blues following the birth of this baby while one did not develop the episode. These findings do not lend support to the findings of other studies which showed that the occurrence of previous Postpartum Blues was highly predisposing to postpartum psychiatric disorders. Nevertheless, the small sample size and the restrictions of the study may have precluded significant findings.

There were eleven women in the study population who had infant sex-preferences. Three of these women had infants of the preferred sex, none of whom experienced Postpartum Blues. Eight women had infants of the not-preferred sex, six of whom experienced Postpartum Blues and two of whom did not experience the episode.

Adjustment difficulties in relation to baby's needs, housework routine, other children's needs, interference from neighbours and relations, and increased company were not reported as a problem by any of the study population. This

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could well be because of the high attendance of the study population at prenatal classes where adjustment difficulties are discussed.

Table 11

Incidence of Stress Items Related to Maternal Role Conflict—Conflict with Other Roles and Distressing Events During the Puerperium—by Incidence of Postpartum Blues in the Study Population

<table>
<thead>
<tr>
<th>Item</th>
<th>Postpartum Blues</th>
<th>No Postpartum Blues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancy unplanned</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Previous Postpartum Blues</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Preference for infant of opposite sex</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Distressing events in the puerperium</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

Six women experienced distressing events during their first week at home after discharge from the hospital. Four of these women developed Postpartum Blues while two did not experience the episode. The distressing events involved physical conditions of either the woman or her baby. One woman developed a breast abscess. A second woman had a lung infection following influenza, and as well as the passage of some blood clots vaginally. A third woman developed complications following the epidural anaesthesia given during labour. Six hours after her return home from the hospital the woman developed severe headache, dizziness, and vomiting and was consequently treated in a general hospital for four
days. One infant developed jaundice as a result of breast milk and was hospitalized for four days. A second infant had a physiological jaundice which increased after he went home; therefore he was hospitalized for five days. Lastly, a third infant developed hyperactivity after going home and he received medications for the condition.

Inadequate Help or Support from Significant Other Persons

Only one of the husbands was not present throughout his wife's first stage of labour, but he was present for her delivery. This woman developed Postpartum Blues. Four of the husbands were not present during their wife's deliveries. Three of these women developed Postpartum Blues while one did not experience the episode.

All of the women responded that they were helped during labour, some by more than one aid. The significant help according to the incidence of Postpartum Blues is shown in Table 12.

Table 12

<table>
<thead>
<tr>
<th>Significant Help</th>
<th>Postpartum Blues</th>
<th>No Postpartum Blues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Husband</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>Nurse</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Breathing</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Prenatal Class</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Demerol</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
All of the women stated that they were helped during delivery, some by more than one aid. The significant help according to the incidence of Postpartum Blues is shown in Table 13.

### Table 13

**Significant Help During Delivery By Incidence of Postpartum Blues in the Study Population**

<table>
<thead>
<tr>
<th>Significant Help</th>
<th>Postpartum Blues</th>
<th>No Postpartum Blues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Husband</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Nurse</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Doctor</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Epidural</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Breathing</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Mirror</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Sixteen women had an extra person, mostly a mother or sister, stay to help for the first five to fourteen days after their return home with their babies. Of these sixteen women, eleven developed Postpartum Blues while five did not develop the episode. Of the women who did not have someone stay to help, nine developed Postpartum Blues and four did not develop the episode. However, extra help at home was not measurable because of inadequate data and because most of the women's husbands had extra time at home over the Christmas period. All but one of the husbands were reported to lend considerable help to their wives, both with baby
care and household routines.

None of the women had husbands who spent time away from home overnight.

**Emotional and Cognitive Changes**

Nine women reported some degree of mood lability in that they experienced vacillating feelings from happiness to sadness. Of these women, eight developed Postpartum Blues while one did not develop the episode. Of the remaining twenty women who reported no mood change, twelve developed Postpartum Blues while one did not develop the episode. Emotional and cognitive disturbances which occurred and their relationship to the incidence of Postpartum Blues are shown in Table 14.

<table>
<thead>
<tr>
<th>Item</th>
<th>Postpartum Blues</th>
<th>No Postpartum Blues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mood lability</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Slight reduction in recent memory</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Slight increase in distractability</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Decrease in concentration</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Increased feelings of dependency</td>
<td>11</td>
<td>1</td>
</tr>
</tbody>
</table>

Because of their insignificance these findings were unable to shed any further light on the question of
the association of diminished mental functioning and subjective distress as suggested by Kane and others.\textsuperscript{18}

Increased feelings of dependency were experienced by twelve women, eleven of whom developed Postpartum Blues and one of whom did not develop the episode. Of the remaining seventeen women who perceived no increase in their dependency feelings nine developed Postpartum Blues while eight did not develop the episode. This finding, while below the significant level of acceptance, indicated a tendency for Postpartum Blues to occur with increased feelings of dependency. This tendency would certainly support the viewpoint of both Auerbach and Riker that increased dependency needs are preparatory to maternal role attainment.\textsuperscript{19}

None of the women reported any feelings of entrapment. None of the women reported that their goals had been blocked. Only one woman stated that her goals had been deferred because of the baby and this woman experienced Postpartum Blues. Fifteen women stated that their goals were more difficult to attain because of the babies. Ten of these women developed Postpartum Blues and five did not develop the episode. Of the remaining thirteen women who stated their goals as unaffected by the babies nine developed Postpartum Blues and four did not develop the episode.

\textsuperscript{18} Kane, op. cit., p. 101.

VI. INCIDENCE OF SPECIFIC ENDOCRINE FACTORS RELATED TO THE MENSTRUAL CYCLE

Information provided by the interview schedules showed that only one woman had not experienced at least one of the menstrual cycle difficulties cited in the literature. The one excepted woman developed Postpartum Blues. Nine women reported the first difficulty (age of menarche between nine and eleven). Five of these women developed Postpartum Blues while four did not develop the episode. Fifteen of the remaining twenty who did not report the difficulty developed Postpartum Blues while five did not develop the episode. Although not significant, the direction of this finding is in contrast to the findings reported by Yalom and others which correlated early age of menarche with Postpartum Blues.\(^{20}\)

Of the six women who reported the second difficulty (irregular periods) five developed Postpartum Blues and one did not develop the episode.

Eight women reported the third difficulty (dysmenorrhoea). Six of these women experienced Postpartum Blues while two did not experience the episode. Therefore fourteen of the women who did not report dysmenorrhoea developed Postpartum Blues while seven did not develop the episode.

Of the thirteen women who reported the fourth

\(^{20}\)Yalom and Others, op. cit., p. 24.
difficulty (premenstrual depression) ten developed Postpartum Blues and three did not develop the episode. Therefore, ten of the women who did not report premenstrual depression developed Postpartum Blues and six did not develop the episode.

Eighteen women reported the fifth difficulty (premenstrual irritability). Thirteen of these women experienced Postpartum Blues while five did not experience the episode. Therefore, of the remaining nineteen women who did not report premenstrual irritability, twelve developed Postpartum Blues and seven did not develop the episode.

Table 15 illustrates the incidence of each menstrual difficulty reported according to the incidence of Postpartum Blues. The findings of the second to the fifth difficulties reported by the study population showed no tendencies supportive of the findings reported in the study by Yalom and others.21

The difficulty of short duration of menstrual flow was not reported by any of the study population.

21 Ibid.
Table 15

Incidence of Menstrual Cycle Difficulties
According to Incidence of Postpartum Blues in the Study Population

<table>
<thead>
<tr>
<th>Difficulty Reported</th>
<th>Number Who Developed Postpartum Blues</th>
<th>Number Who Did Not Develop Postpartum Blues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of Menarch 9-11 years</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Irregular periods</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Dysmenorrhoea</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Premenstrual Depression</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Premenstrual Irritability</td>
<td>13</td>
<td>5</td>
</tr>
</tbody>
</table>

V. INCIDENCE OF SLEEP DEFICIENCY

Information concerning sleep was collected by the interview schedules. With regard to the pattern of sleep at home during the first week, no conclusions other than it was reportedly better than when in hospital, could be drawn due to insufficient data. Therefore, only the data from the hospital interview schedule were used. The amount of uninterrupted sleep obtained from the day prior to the onset of labour and for the three days following confinement were examined. Of necessity, any sleep which may have been obtained during labour was not accounted for. It was felt that the women could not estimate any sleep that they may have had and it was beyond the scope of this study to make observations on
sleep. Also, it was improbable that even one sleep cycle could have been completed during labour in the hospital because of painful contractions and because of nursing care procedures. Therefore, the four-day period referred to in this section is actually four twenty-four hour days plus the duration of labour which was between one hour and thirty minutes and fourteen hours and ten minutes.

The number of sleep cycles possible during each period of uninterrupted sleep reported by the women for each of the four days was estimated. A minimum of eighty-five minutes was counted as equal to one sleep cycle.\(^{22}\) The number of sleep cycles for each woman was then totalled for the four-day period.

Next, the data were tabulated in the following way:

<table>
<thead>
<tr>
<th></th>
<th>Thirteen sleep cycles or more in four days</th>
<th>Twelve sleep cycles or less in four days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postpartum Blues</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>No Postpartum Blues</td>
<td>6</td>
<td>3</td>
</tr>
</tbody>
</table>

The chi square test showed a significant difference between the two groups. The result was 7.74 at the .05 level.

The number of sleep cycles were totalled for two days and for three days of the four-day period under examination and were similarly tested. However, the findings were insignificant. It would appear, then, that if the deficiency of sleep persisted beyond three days, the development of Post-

partum Blues resulted. Perhaps this explains the fact noted in the literature that Postpartum Blues rarely occurs before the third postpartum day.  

In accordance with sleep theory four or more sleep cycles in twenty-four hours was regarded as adequate sleep, two or three cycles as inadequate and zero or one cycle as a sleep deprivation. Therefore, twelve or less sleep cycles in four days constituted inadequate sleep or sleep deprivation in the study population. In view of the exertion of labour the sleep needs are generally considered to be increased in the early puerperium. Consequently, sleep deficiencies imposed an even greater hardship on the recently-confined women. It is not surprising, then, that this finding was significant. This finding is similar to a finding reported in the study by Yalom and others. The finding is also supportive of the literature in that the lack of sleep may lead to exhaustion that precedes depression.

In fact, of the seventeen women who experienced Postpartum Blues at home seven thought that the episode had been caused by fatigue due to deficient sleep. Therefore the perceptions of the study population which implicated a

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25Yalom, op. cit., p. 20.

reduction in sleep as a cause of Postpartum Blues also supports this finding of the study.

VI. SUMMARY

Data collected by the interview instruments were described. Selected characteristics of the study population were presented. The incidence of Postpartum Blues as derived from the data was described. Data obtained to answer the three questions asked by the study negatively answered the first and second questions and affirmatively answered the third question when statistically analyzed.

For the first question the data showed that the items of maternal role conflict examined did not significantly influence the development of Postpartum Blues.

For the second question the data showed that specific endocrine factors related to the menstrual cycle did not significantly influence the development of Postpartum Blues.

For the third question the data showed that sleep deficiency, in terms of the number of sleep cycles over a four-day period, significantly influenced the development of Postpartum Blues. Of the twenty women who experienced sleep deficiencies, seventeen (85 percent) developed Postpartum Blues whereas of the nine women who did not experience sleep deficiencies only three (33 percent) developed Postpartum Blues.
CHAPTER V

SUMMARY, CONCLUSIONS, AND
RECOMMENDATIONS

I. SUMMARY

The purpose of this descriptive study was to determine the influence of certain variables upon the development of Postpartum Blues. The study was planned to answer the following questions: (1) Do factors related to maternal role conflict influence the development of Postpartum Blues? (2) Do specific endocrine factors related to the menstrual cycle influence the development of Postpartum Blues? (3) Does a reduction in the number of sleep cycles influence the development of Postpartum Blues?

A review of the literature presented relevant theory and research pertinent to Postpartum Blues in five sections. The first section viewed the puerperium as a developmental crisis. The second section viewed the changes occurring in the puerperium. The third section viewed some concepts of role theory. The fourth section viewed sleep needs. Lastly, the fifth section viewed the Postpartum Blues syndrome. The literature review showed that the Postpartum Blues syndrome has a reported occurrence of anywhere between five and eighty percent. A variety of factors were reported as implicated in the development of the syn-
drome. The most commonly suggested factors were maternal role conflict items, endocrine factors, and sleep deficiency. The literature emphasized the importance of assisting women to meet their emotional needs in the puerperium. Research studies on Postpartum Blues were limited both in number and scope.

Instruments used to obtain data relevant to the questions asked by the study were two semi-structured interview schedules and one semi-structured questionnaire. These were developed following the literature review. In addition, the Beck Depression Inventory was used to measure the degree of depression present at the time of the interview.

The study population consisted of twenty-nine postpartum women who delivered full-term, apparently healthy infants, in one obstetrics and gynecology hospital in the Greater Vancouver area. Other criteria of eligibility to the study were willingness to participate and certain language, demographic, health, and obstetrical requirements.

Two interviews were conducted, one in hospital on the third or fourth day, and one in each woman's home at around four weeks after confinement.

The data collected by the interview instruments were descriptively analyzed. Characteristics of the study population were described and shown in frequency distribution tables. The incidence of Postpartum Blues was assessed by information provided by the Blues Questionnaire. The Beck Depression Inventory did not prove to be a useful measure in predicting the development of Postpartum Blues in the women
at home on the basis of their total score on the inventory administered at the hospital interview. Data pertinent to maternal role conflict, specific endocrine factors related to the menstrual cycle, and sleep deficiencies were described in terms of their coincidence with the development of Postpartum Blues. Tables containing this information were included. The chi square test was used to determine any significant differences between the women who experienced Postpartum Blues and the women who did not experience the episode in relation to each of the items constituting the three factors under examination.

The results showed that there were no significant differences for items leading to maternal role conflict or for items of specific endocrine factors related to the menstrual cycle. However, there was a significant difference for sleep deficiency. It was shown that sleep deficiency in terms of the number of sleep cycles over a four-day period, significantly influenced the development of Postpartum Blues. The majority of the women (85 percent) who experienced sleep deficiencies developed Postpartum Blues whereas the minority of those who did not experience sleep deficiencies developed Postpartum Blues.

II. CONCLUSIONS

On the basis of the findings of this study, the following conclusions were made:

1. Postpartum Blues may well be the trivial
and fleeting phenomenon as described by Pitt.¹ None of the women reported Postpartum Blues to be associated with prolonged negative feelings. Most of the women reported viewing the episode as unpleasant while it lasted but not as overwhelming. Therefore, it was concluded that, for this population, Postpartum Blues was of no great importance. Furthermore, four women viewed the episode as a learning experience. Accordingly Postpartum Blues may, in fact, be beneficial to some women as the literature suggested.²

The longest duration of Postpartum Blues occurred intermittently over a period of between four and seven days with the exception of one which lasted intermittently over two weeks. This finding is in agreement with the assumption of the study, derived from the literature, that Postpartum Blues can be distinguished from other forms of depression by its duration.

The assumption that the degree of severity of Postpartum Blues could be measured by the self-reported statements of the women was supported in part by the study. Because none of the women in the study indicated symptoms or exhibited behaviour consistent with depression of a more severe nature than the Postpartum Blues experienced, this conclusion was not definitive. Nevertheless, the degree of severity of the episode was indicated by the women as not severe.


That the Beck Depression Inventory could measure the degree of severity of Postpartum Blues was not born out by the findings. Therefore, it was concluded that the inventory was not a useful measure in predicting the development of Postpartum Blues on the basis of the inventory score on the third or fourth day postpartum. Conversely, it could be concluded that the inventory, by placing all but one woman in the non-depressed category, determined that Postpartum Blues was a non-depressed state. However, such a conclusion would be in contradiction to the reported feelings of depression experienced by the women in conjunction with Postpartum Blues.

2. The items of maternal role conflict examined in this study were not of sufficient magnitude or number to influence the development of Postpartum Blues. Alternatively, the items of maternal role conflict were counter-balanced by positive forces such that their effect was not sufficient to influence the development of Postpartum Blues. Then again, the items of maternal role conflict alone may not be influential, but must be in combination with items not present in this population. On the other hand, equal weighting of the items of maternal role conflict may have been a faulty method in the data analysis, thereby masking the true weight of each item.

3. The endocrine factors related to the menstrual cycle which were examined were not, alone or in combination, influential in the development of Postpartum Blues. This is in contradiction of the findings of a study with a population
Sociocultural differences between the two populations may account for the discrepant findings.

4. Sleep deficiency is detrimental to the emotional well-being of postpartum women. The majority of the women perceived fatigue due to sleep deficiency as the underlying cause of the development of Postpartum Blues. However, there was little the women could do in the hospital, and sometimes at home, about increasing the amount of uninterrupted sleep.

5. The hospital environment and routines are not conducive to adequate sleep for most postpartum women. The majority of the women reported hospital noises and routines including the 5 a.m. infant-feeding as disruptive of their sleep.

6. Public Health Nurses should play a greater role in education and support of postpartum women at home. A number of women had some questions on self or baby care that a Public Health Nurse could have answered. Further information on what is normal for infants with regard to such things as eating, sleeping, and elimination habits, and skin condition would have benefitted most primiparas. Other women could have been helped by more specific advice or just from reassurance that they were good mothers.

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III. RECOMMENDATIONS

The results of this study indicate that: (1) postpartum women frequently encounter sleep deficiency; (2) sleep deficiency is an influential factor in the development of Postpartum Blues; (3) women who attended prenatal classes have an understanding of the puerperium and its inherent problems, judged by the reflection of content learned at classes; (4) husbands who attended prenatal classes and at their wives' labour and delivery were very supportive of their wives at home; (5) postpartum women at home have questions about baby care, particularly about feeding and about what is normal for a baby of that age; (6) postpartum women commonly view hospital nursing staff, public health nurses, and physicians as very busy people and consequently, the women are reticent to call upon them for advice.

In view of these results the following recommendations are made:

1. Regarding further research, that: (a) a study of a larger and more diverse population at a time other than December-January be conducted; (b) a better method of collecting sleep data be used; (c) interviews be conducted during the episode of Postpartum Blues, and (d) a social desirability measure be used; (e) instruments for data collection be pretested on a larger scale.
2. Regarding education, that (a) a higher attendance at prenatal classes of expectant parent couples of all socio-economic groups be actively sought; (b) more education within the hospital be made available, possible to include audio-visual self-use kits; (c) practice sessions which include discussions and rehearsal of likely problems to be encountered by the mother be encouraged; (d) a "handout" sheet containing information on tips toward preventing Postpartum Blues and toward facilitating the mother's confidence in her new role be provided.

3. Regarding nursing practice, that hospitals: (a) review current routines and nursing care procedures to reduce disturbances in sleep and permit a longer period of time to be available for sleep; (b) consider moving women after their first postpartum day to a unit environmentally more conducive to rest and comfort where there are few noises and interruptions.

4. Regarding resources that (a) classifications be made among health resource persons as to who advises on matters of infant care, such as feeding. Alternatively, that health professionals establish common routines for advising mothers on such matters; (b) greater liaison between the hospital and public health
agencies be established to ensure consistent and immediate feedback of information regarding clients to both parties.

5. Further to resources, that a liaison nurse employed by hospitals could: (a) interact with postpartum women in hospital to determine their needs; (b) facilitate individual or group learning; (c) coordinate two-way referrals and exchange of information with other health or health-related personnel in the community.
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BIBLIOGRAPHY

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OTHER


I, ____________________________, agree to participate in a study at ____________________________ Hospital Maternity Unit.

The study is of mother's feelings in the first six weeks after their babies are born.

I understand that:

- 2 interviews will be held, one at the hospital on the fourth day after the birth of the baby, and one at about four weeks after the birth of the baby, when I am at home. The interviews will be held at my convenience, and will each take about half of one hour.

- no risks are involved and no names will be used.

- I am free to withdraw from the study at any time.

- On request I will be given knowledge of the results.

Signature of Participant ____________________________
Signature of Researcher ____________________________
Date ____________________________
HOSPITAL INTERVIEW

Code No.
Address
Phone
Date of Interview
Age
Gravida
Parity
Estimated date of Confinement
Confinement Date:
  Time: 
  Outcome:  M  F
Apgar Score of Baby (1) (2)
Birth Weight of Baby
Length of Labour - 1st stage ______
  2nd stage ______
  3rd stage ______ TOTAL ______
Drugs Administered- 1st stage
  2nd stage
  3rd stage
  Postpartum
Episiotomy or Laceration
Sutures

If not Canadian, what country are you from
How long have you lived in Canada
Have you had any major illness during or apart from this pregnancy
Have you ever had a psychiatric disorder
Are you and the baby well at present
What is your marital status: M  S  W  D  C/L
No. years living with husband or partner
Are your parents alive: M. F.
   Where are they living: M. F.
Are your husband's parents alive: M. F.
   Where are they living: M. F.
What is your religion
What is your husband's religion
Were you brought with a religious background: Yes No
   Was your husband: Yes No
Do you follow your religion
Does your husband follow his religion
What was the highest education completed:
   - self
   - husband
   - your mother
   - your father
   - your husband's mother
   - your husband's father
What is your occupation:
Are you planning to work
If yes, when do you begin work
Had you always expected some day to become a mother:
   - Yes
   - No
What is your husband's occupation:
Is he working: No Part-time Full-time Shift-work
What is the occupation of: your mother your father
   your husband's mother your husband's father
How many children do you have at home:
How old is your youngest child
Did you have any physical problems with any
- previous pregnancy: No_____ A little_____ A lot____
- labour: No_____ A little_____ A lot____
- birth: No_____ A little_____ A lot____

Did you have any emotional problems with any
- previous pregnancy: No_____ A little_____ A lot____
- labour: No_____ A little_____ A lot____
- birth: No_____ A little_____ A lot____

Did your mother or sisters have any problems with pregnancy, labour, or birth:
No_____ A little_____ A lot____
Who____
What____

At what age did your periods start:

How many days do your periods last:

Are your periods regular:

Have you had trouble with painful periods:
No_____ A little_____ A lot____
How long for:
When did it stop:

What did you do for it:
take medicine__go to bed__apply heat__miss work__

Have you felt depressed or irritable before your periods:
- off the pill: No_____ A little_____ A lot____
- on the pill: No_____ A little_____ A lot____

For how long were you trying to become pregnant:

Did you attend prenatal classes:
No_____ A few_____ All____
Where____

To learn more about pregnancy, labour, birth, and baby care, did you:
- read books: No_____ A little_____ A lot____
- talk with friends or relatives who are not professionals:
  No_____ A little_____ A lot____
- talk with your doctor or nurse

No____ A little____ A lot____

With this pregnancy, did you have concerns about:

- labour

No____ A little____ A lot____
- birth

No____ A little____ A lot____
- baby care

No____ A little____ A lot____

Did you discuss these with:

- your husband

No____ A little____ A lot____
- your family or friends

No____ A little____ A lot____
- your doctor or nurses

No____ A little____ A lot____

Do you have any concerns now about:

- baby care

No____ A little____ A lot____
- money

No____ A little____ A lot____
- housing

No____ A little____ A lot____
- other

No____ A little____ A lot____

Have you had previous experience with babies and their care:

No____ A little____ A lot____

Is your husband away from home:

No____ A little____ A lot____

Was your sleep interrupted during the last week before your labour started due to:

- piles

No
How many times each night
- varicose veins

No
How many times each night
- frequency of urine

No
How many times each night
- other

No
How many times each night
Average amount of sleep

Did you feel rested when you got up in the morning

How many hours of sleep did you have in the 24 hours before your labour started     Total____

How many hours of sleep have you had each day since the baby was born

<table>
<thead>
<tr>
<th></th>
<th>Straight sleep</th>
<th>Interrupted</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day 3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Did you expect labour to be:
- easier than it was
- about the same as it was
- harder than it was

Was your husband present during the labour and delivery:

No     How long

Who or what helped you the most during labour:

Who or what helped you the most during the birth:

Why did you come to this hospital to have your baby:
- no reason
- your doctor attends here
- friends advised you
- you decided it was the best for you

How are you feeding your baby:
- bottle
- breast

How is the feeding going

Some mothers definitely prefer a boy or girl; do you have a preference:

Yes____  No____

When is a suitable time for me to visit you at home

Date ___________ Time_________
BECK INVENTORY

Case Number: NAME: __________________________
DATE: __________________________

A. 7 ( )
0 I do not feel sad.
1 I feel sad.
2 I am sad all the time and I can't snap out of it.
3 I am so sad or unhappy that I can't stand it.

B. 8 ( )
0 I am not particularly discouraged about the future.
1 I feel discouraged about the future.
2 I feel I have nothing to look forward to.
3 I feel that the future is hopeless and that things cannot improve.

C. 9 ( )
0 I do not feel like a failure.
1 I feel I have failed more than the average person.
2 As I look back on my life, all I can see is a lot of failures.
3 I feel as if I am a complete failure as a person.

D. 10 ( )
0 I get as much satisfaction out of things as I used to.
1 I don't enjoy things the way I used to.
2 I don't get real satisfaction out of anything anymore.
3 I am dissatisfied or bored with everything.

E. 11 ( )
0 I don't feel particularly guilty.
1 I feel guilty a good part of the time.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.

F. 12 ( )
0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.
13 (  ) G.  
0 I don't feel disappointed in myself. 
1 I am disappointed in myself. 
2 I am disgusted with myself. 
3 I hate myself. 

14 (  ) H.  
0 I don't feel I am any worse than anybody else. 
1 I am critical of myself for my weaknesses or mistakes. 
2 I blame myself all the time for my faults. 
3 I blame myself for everything bad that happens. 

15 (  ) I.  
0 I don't have any thoughts of killing myself. 
1 I have thoughts of killing myself, but I would not carry them out. 
2 I would like to kill myself. 
3 I would kill myself if I had the chance. 

16 (  ) J.  
0 I don't cry any more than usual. 
1 I cry more now than I used to. 
2 I cry all the time now. 
3 I used to be able to cry, but now I can't cry even though I want to. 

17 (  ) K.  
0 I am no more irritated now that I ever am. 
1 I get annoyed or irritated more easily than I used to. 
2 I feel irritated all the time now. 
3 I don't get irritated at all by the things that used to irritate me. 

18 (  ) L.  
0 I have not lost interest in other people. 
1 I am less interested in other people than I used to be. 
2 I have lost most of my interest in other people. 
3 I have lost all of my interest in other people. 

19 (  ) M.  
0 I make decisions about as well as I ever could. 
1 I put off making decisions more than I used to. 
2 I have greater difficulty in making decisions than before. 
3 I can't make decisions at all any more.
20 ( ) N.  
0 I don't feel I look any worse than I used to. 
1 I am worried that I am looking old or unattractive. 
2 I feel that there are permanent changes in my appearance that make me look unattractive. 
3 I believe that I look ugly. 

21 ( ) O.  
0 I can work about as well as before. 
1 It takes an extra effort to get started at doing something. 
2 I have to push myself very hard to do anything. 
3 I can't do any work at all. 

22 ( ) P.  
0 I can sleep as well as usual. 
1 I don't sleep as well as I used to. 
2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep. 
3 I wake up several hours earlier than I used to and cannot get back to sleep. 

23 ( ) Q.  
0 I don't get more tired than usual. 
1 I get tired more easily than I used to. 
2 I get tired from doing almost anything. 
3 I am too tired to do anything. 

24 ( ) R.  
0 My appetite is no worse than usual. 
1 My appetite is not as good as it used to be. 
2 My appetite is much worse now. 
3 I have no appetite at all anymore. 

25 ( ) S.  
0 I am not losing as much weight as is to be expected. 
1 I feel I am not losing more weight than is to be expected. 
2 I am losing more weight than is to be expected. 
3 I am losing a lot more weight than is to be expected. 

I am purposely trying to lose weight by eating less. yes____ no ____ 

26 ( ) T.  
0 I am no more worried about my health than usual. 
1 I am worried about physical problems such as aches and pains; or upset stomach; or constipation. 
2 I am very worried about physical problems and it's hard to think of much else. 
3 I am so worried about my physical problems, that I cannot think about anything else.
0 I have not noticed any recent change in my interest in sex.
1 I am less interested in sex than I used to be.
2 I am much less interested in sex now.
3 I have lost interest in sex completely.

Time elapsed since clinical interview.
Have you heard of the "baby blues"?
What do you think they are?
Have you had "the blues" following the birth of this baby?
When?
How long did they last?
What effect did "the blues" have on you?
Did you cry?
If so, for how long?
how many times?
What did you do to get back to normal?
Did others help?
Who helped?
What did they do that helped?
What do you think caused "the blues"?
Do you think "the blues" can be prevented?
How?
HOME INTERVIEW

Since coming home, have you taken:

<table>
<thead>
<tr>
<th>Type and Dose</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>sleeping pills or tranquilizers</td>
<td></td>
</tr>
<tr>
<td>pain killers</td>
<td></td>
</tr>
<tr>
<td>vitamins</td>
<td></td>
</tr>
<tr>
<td>other</td>
<td></td>
</tr>
</tbody>
</table>

How many hours sleep have you had in the last 3 days:

<table>
<thead>
<tr>
<th></th>
<th>straight sleep</th>
<th>interrupted sleep</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day 3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Do you have any concerns about the baby:

No____ A few____ A lot ____

If yes, what are your concerns?

Have you found it difficult adjusting to the:

- baby's needs No____ A little____ A lot____
- housework routine No____ A little____ A lot____
- other children's needs No____ A little____ A lot____
- interference from neighbours and relations No____ A little____ A lot____
- increased company No____ A little____ A lot____

Did you have a relative or close friend stay with you to help you?

If yes, for how long:
0 I get along with my mother very well
1 I do not get along with my mother very well
2 I get along with my mother rather badly
3 I cannot stand my mother

0 My husband/partner and I are very close to each other
1 My husband/partner and I get along alright
2 My husband/partner and I do not get along very well
3 My husband/partner and I just put up with each other

0 I feel very happy all of the time
1 I feel happy most of the time
2 Sometimes I feel happy and sometimes I feel sad
3 I do not feel happy any of the time

0 I can remember things as well as I could before
1 Recently, I cannot remember things as well as I could
2 Recently, I forget a lot
3 Recently, I forget everything

0 I can concentrate as well as I could before
1 I cannot concentrate as well as I could before
2 I cannot concentrate on things for long at all
3 I cannot concentrate on anything at all

0 I am not distracted by things any more than usual
1 Recently, I am distracted by things more than usual
2 Recently, I am distracted by things much more than usual
3 Recently, I am distracted by anything at all

0 I feel that I do not need to be cared for
1 I feel that I need to be cared for a little more than usual
2 I feel that I need to be cared for a lot more than usual
3 I feel that I need to be cared for most of the time

0 I feel that having the baby has not interfered with my plans
1 I feel that having the baby makes it harder for me to keep to my plans
2 I feel that having the baby makes me postpone my plans
3 I feel that having the baby forces me to give up my plans altogether

0 I feel that having the baby does not trap me
1 I feel that having the baby casts the die so that I stay where I am
2 I feel that the baby has trapped me into a situation I would rather have left
3 I feel that the baby has trapped me into an impossible situation
"BLUES" QUESTIONNAIRE

Have you had "the blues" following the birth of this baby?
When?
How long did they last?
What effect did "the blues" have on you?
Did you cry?
If so, for how long?
how many times?
What did you do to get back to normal?
Did others help?
Who helped?
What did they do that helped?
What do you think caused "the blues"?
Do you think "the blues" can be prevented?
How?
Do you think having had the blues was a bad experience?