Mothering and postpartum social network supports

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MOTHERING AND POSTPARTUM SOCIAL NETWORK SUPPORTS

Iowa State University

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Mothering and postpartum social network supports

by

Helen Holz Raikes

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INTRODUCTION

While the period of early infancy generally is regarded as one of the most important for setting the child's life stage and while great importance is placed on how the mother performs during that time period, little research has been devoted to how these beginnings are themselves nourished. If import rides on early mothering, it would seem crucial to know under what conditions positive outcomes are likely to occur.

Writers (Brazelton, 1980; Chessler, 1980) have advocated, for the child's and mother's good, a postpartum period devoted to "mothering the mother." Such a period is common in a number of less developed countries where a mother may not be left alone with the baby until her milk is established, baby is in a routine, is alert and is able to signal clearly his or her needs (Brazelton, 1980). It would seem likely that success in early mothering, especially for first-time mothers, would be facilitated by supports from the network of persons around the mother. To examine that hypothesis is the purpose of the present study.

Theoretical Framework

The framework for the study is drawn from several theory banks: universalist anthropology; human ecology; social network; sociology of childbirth; and infant-mother interaction conceptualizations. Universalist anthropology contributes the basic premise that social maintenance systems influence and are even necessary to maintain parenting behaviors (Rohner, 1975). Thus, the emphasis is on the dynamic interplay between social contextual factors and factors within the parent-child dyad. This view is
in opposition to personality-oriented theories of parenting (Sears, Maccoby & Levin, 1957) whereby parent behaviors largely are attributed to forces originating within the parent, and to some extent, the child.

Human ecology theory as advanced by Bronfenbrenner (1977) views the influences on parents and children as coming from all levels of a psychosocial ecosystem within which the family is embedded. The theory places the child in a series of nested arrangements with increasingly widening scope, such as the child in family in community in economic system, and represents a framework whereby influences of each strata can be identified, quantified and evaluated.

Related to human ecology theory but specific to the influences of the band of individuals immediately surrounding the nuclear family is social network theory. Cochran and Brassard (1979) assert that families always have been embedded in networks of friends, relatives and neighbors which have influenced the rearing of children. These authors recently have extended the applicability of network theory to child development and have developed a model which is utilized as a basis for the present study. The model as presented by Cochran and Brassard separates the dimensions of networks into characteristics, functions and outcomes. Network characteristics include size; proximity; continuity; density; frequency of contact; and intensity, directedness and content of dyadic relationships. Network functions include sanctions for childrearing, stimulation, information and assistance. Finally, outcomes may refer to any parental or child behavior of research interest.
For purposes of the present study, two levels of social network variables were identified: network supports and mothering outcomes. Network supports represent a collapsing of network structure (characteristics) and function, a combination found in the literature (Garbarino & Sherman, 1980), and mothering outcomes were selected representing both mothering attitudes and behaviors.

Five network supports were selected. They are called Size, Access, Dyadic Relations, Community and Rituals. The first three were formed by combining network characteristics identified in the model by Cochran and Brassard (1979) and the other two are extensions of the model. Size refers to the number of persons in the network. Access combines proximity, frequency of contact, continuity and similarity from the model. Dyadic Relations combines intensity, directedness and content of dyadic relations from the model. Community refers to involvement in the community, and Rituals refers to participation in postpartum rituals and customs.

Mothering outcomes were less readily determined. There were numerous maternal attitudes and behaviors that could have been examined as mothering outcomes. The following have all appeared in the literature as signs of well-being in early mothering: less (vs. more) depression (Oakley, 1980; Heitler, 1976); positive feelings towards motherhood and the baby (Oakley, 1980); maternal confidence (Myers-Wall & Coward, Note 1); success in feeding (Dunn, 1977); overall maternal responsiveness to the baby (Kennell, Jerauld, Wolfe, Chesler, Kreger, McAlpine, Staffa & Klaus, 1974); a view of the baby as no more difficult than average (Broussard & Hartner, 1970); a stimulating home environment (Schwartz, 1978), and a
synchronous and reciprocal interaction between mother and baby (Brazelton, 1980; Stern, 1977; Schaffer, 1977). However, for the present study mothering outcomes were selected that met two criteria: 1) they are of importance, either from an empirical or theoretical point of view, to the development of the infant, and 2) a connection between the mothering outcome and network support is suggested by theory or by other studies but has not been investigated.

Based on the above-stated criteria, three mothering outcomes were selected. They are: 1) Perception of the Transition, 2) Perceived Competency, and 3) Infant-Mother Interaction.

The first outcome, Perception of the Transition, refers to the mother's retrospective assessment of the difficulties involved in making the transition to motherhood. It includes such factors as whether it was a hard adjustment for her, whether the baby seemed easy or difficult to care for, whether she suffered from depression. The focus on adjustment emanates from life event theory (Oakley, 1980) whereby any life transition is viewed as having adjustment demands. Childbirth is considered a life event by virtue of the quantity of change that often accompanies it. The change may include retirement from employment; role change; learning a new job; institutionalization; body change, and surgery (Oakley, 1980). Oakley proposes that mothers with support systems are able to incorporate these changes and thereby interpret the transition to motherhood as a gain of the relationship with the baby. Mothers lacking supports, Oakley proposes, are more likely to interpret the change as loss of the former self. The sense of loss may be expressed in depression and negative
feelings about the time period. Depression, according to Schiffer (1977), may prevent a mother from responding sensitively to her newborn.

The second outcome, Perceived Competency, focuses primarily on the mother's sense of well-being in handling day-to-day aspects of mothering. The link between the mother's perception of her own competency and her network support comes from Oakley (1980) and Abernathy (1973). Mothers who have support, Oakley asserts, are more likely to be in tune with the demands of the maternal role, to feel good about being a mother, and to feel good about their performance as mothers. Abernathy suggests supported mothers will perceive themselves as more competent because the support systems offer them feedback and corroboration. If the mother's network consists of persons who are similar to her, and if she interacts with them frequently, she is likely to find validation for her practices and, thus, build confidence. A confident and secure mother is believed to be a better mother (Kenniston, 1977; Spock, 1970; Dodson, 1970) because she is believed to be more consistent and less likely to hesitate in determining the baby's needs. Thus, the baby is likely to have a reliable, predictable response to his or her communications.

The third outcome, the Infant-Mother Interaction, includes both the mother's general responsiveness to the baby and Synchrony. Responsiveness offers a molar or broad view of the interaction. A responsive mother is assumed to perceive her baby's cues, interpret them correctly and to respond to them contingently and appropriately (Ainsworth, 1973). Such responsiveness has been related to infant-mother attachment (Ainsworth, 1973) and infant's perception of herself or himself as an agent of action.
(Lewis & Goldberg, 1969; Bruner, 1979). Synchrony is an infant-mother relationship variable determined by micro or second-by-second analysis of the interaction. Synchronous mothers are able to mesh interactions with the infant across situations such as feeding and playing and across sensory modalities such as looking, vocalizing, and motion in a contingent manner so as to engage the child in back-and-forth exchanges or dialogues. Synchronous interactions are theorized to be a framework into which the mother weaves variation, extension of attention (Stern, 1977), inclusion of objects (Brazelton, Koslowski, & Main, 1974), and, later, labels for objects and their properties (Bruner, 1979). Network support is theorized to aid interaction by providing models of interaction (Stern, 1977), by defusing negatively intense interactions (Oakley, 1980) and by offsetting postpartum depression (Brazelton, 1980) which may interfere with successful interaction (Schaffer, 1977).

Purpose

The major purpose of the study was to determine if there are differences in mothering outcomes between mothers having, and those not having, five kinds of network supports. In this study network supports are Size, Access, Dyadic Relations, Community and Rituals. Mothering outcomes include Perception of the Transition, Perceived Competency and Infant-Mother Interaction.

Operational Definitions

Network supports. The following five network supports are defined for purposes of the study. The first three of these were formed by
combining characteristics identified in a model by Cochran and Brassard (1979) and the other two follow from their model.

Size: The Number of persons the mother identified as support persons.

Access: Extent to which mother's support persons are local (Proximal), relatives or young mothers (Similar), with whom she has had longstanding relationships (Continuity) and who she sees often during the postpartum period (Frequency).

Dyadic Relations: The extent to which mother's relationships are directed towards her (Directedness), are supportive in nature (Content) and allow her to prevail for help (Intensity).

Community: Involvement of the mother and the father in the community.

Rituals: The extent to which mother and father participate in modern and/or traditional rituals and customs.

Mothering Outcomes. For purposes of this study mothering outcomes will include the following:

Perception of the Transition: The assessment mother gives to questions relating to adjustment to motherhood and to the new baby.

Perceived Competency: The assessment mother gives to questions relating to day-to-day requirements of motherhood, to recognizing baby's cues, to decisions about the baby care and to the overall relationship with the baby.
Infant-Mother Interaction: The observed maternal responsiveness (Caldwell, Heider & Kaplan, Note 2) and videotaped analysis of an infant feeding episode for Synchrony (Karger, 1979).

Hypotheses

The general hypothesis is that there are differences in mothering outcomes between mothers who have, and those who do not have, network supports. Specific null hypotheses for test are:

1. There are no significant differences in Perception of the Transition between mothers who have, and do not have, network supports.

2. There are no significant differences in Perceived Competency between mothers who have, and do not have, network supports.

3. There are no significant differences in Infant-Mother Interaction between mothers who have, and who do not have, network supports.

4. There are no significant relationships between mother's network supports.

5. There are no significant relationships between mothering outcome.
LITERATURE REVIEW

Grandparents, aunts, uncles, neighbors, mother's friends, the contacts from the PTA—those people who make up the parent's social network—have been there all along as part of the backdrop of parenting. Yet, until recently, their impact on parenting has gone largely unexamined. In psychology, there has been a general failure to investigate seriously the role of ecological factors in human behavior. Ecological psychologist Roger Barker claimed other sciences recognize laws are influenced by how their phenomena are distributed in nature, but "psychology has attended almost exclusively to probing the relevant circuitry within the skins of its subjects...excised from complexities of real life settings in which they occur" (Barker, 1968, p. 4). Guided by a similar criticism of mainstream child development (Bronfenbrenner, 1977) has stimulated the ecology of human development movement from which has followed a small collection of studies on the effects of contextual factors on parenting.

Several of these studies have focused specifically on the impact of support on parents. Parenting support generally refers to the systems and basic customs surrounding the nourishment, sheltering and protection of parents and children (Whiting & Child, 1953). Empirically, parenting support has lacked a common referent but has translated into the presence of other adults in the daily childrearing regimen (Rohner, 1975), assisting grandparents (Whiting & Child, 1953), an effective social network (Abernathy, 1973; Garbarino & Sherman, 1980), and in the postpartum period to having a visiting nurse (Brown & Hurlock, 1977), a helpful husband (Oakley, 1980), extended family help in the first week (Bowker,
1977), information about breast feeding (Heath, 1976), frequent neighborhood contact (Carveth & Gottlieb, 1979), a job, secure housing and some knowledge of babies (Oakley, 1980).

Studies assessing the impact of support on parenting are framed by the assumption that there are better and worse outcomes in parenting. While there is little agreement on what variable best represents successful outcomes, support has been associated positively with parents' acceptance of their children (Rohner, 1975), mother's sense of competency (Abernathy, 1973), and negatively associated with mistreatment of children (Garbarino & Sherman, 1980; Polansky, Chalmers, Buttenwieser & Williams, 1979). In the postpartum period specifically, while again there is little agreement about what best constitutes successful outcomes, support has been associated positively with general adjustment (Bowker, 1977), success in breast feeding (Heath, 1976), and negatively with anxiety (Carveth & Gottlieb 1979) and postpartum depression (Oakley, 1980).

While the lack of agreement on both independent and dependent variables is problematic, there is emerging a larger point, from which differentiation is likely to follow, that successful parenting at any stage and however it is named doesn't occur in a vacuum but rather is made possible in complex ways by interrelationship with the immediate social environment. The review that follows will examine those relationships in two parts. Studies pertaining to the impact of support systems on parenting behaviors in general will be presented first followed by studies pertaining to the postpartum period specifically. It should be noted that portions of the literature are what some would call "soft," therefore
sophisticated statistical comparisons and full reporting of procedures aren't as prevalent as they might be in a more scientifically mature literature.

Support Systems and Parenting in General

The need for societal maintenance systems to support parenting is a universal law of human behavior according to Robert Rohner (1975), of the universalist school of anthropology, a branch of the discipline devoted to the search for universal laws or truths about human beings irrespective of culture. Rohner postulates that human beings, across cultures, need approval and acceptance to thrive and that societal maintenance systems frame accepting person-to-person relations. In parent-child relations accepting and trusting attitudes towards other people are first nourished, thus maintenance systems around parenting, Rohner hypothesizes, are of fundamental importance to cultivating healthy individuals. In Rohner's study, 101 societies representing six geographic regions of the world were classified by their degree of acceptance or rejection of two- to six-year-old children. Classifications were made on a 1-5 point scale using published ethnographies as the data source. Multiple ethnographies from a single culture were analyzed to overcome ethnographer bias. The authors found the following societal maintenance systems were associated at the .05 level of significance with parental acceptance (vs. rejection) of children: involvement of a second adult in the household to help assume child care as opposed to mothers being alone during the day; involvement of grandparents as significant child-rearing agents; per-
formance of rituals in relation to the infant (particularly beautifying rituals such as the use of adornment, nose molding and head shaping); and involvement of the father as a significant child-socialization agent. Altogether Rohner concluded if others in addition to the mother were involved in the daily child care regimen the more likely the mother was to have accepting attitudes towards the child(ren). Rohner argued that the presence of other adults complements parent-child relations and cushions their intensity.

In an analysis of families in six cultures, Mintern and Lambert (1964) similarly found children who lived in extended family arrangements received more warmth than did children living in nuclear families. These authors state, "...the presence of grandparents in a house, particularly a grandmother, reduces the isolation of mothers in nuclear families, provides an alternate caretaker and therefore allows the mother to express more warmth to the children than when she is their sole custodian?" (p. 260).

Grandparents are not the only supports for the nuclear family. Friends and neighbors support the nuclear family as well. The concept of "social network" provides a convenient unit of study that may include either relatives or neighbors. Abernathy (1973) measured social network supports to determine their role in perceived maternal competency among 42 middleclass mothers of preschoolers. Mothers were asked to identify their four main network contacts, and these four-person networks were classified according to tightness. Network features that were added to form a tightness score included 1) kinship or friendship, 2) frequency of
contact, 3) physical distance between residences, 4) time length of relationships, 5) pairs who were acquainted, and 6) pairs who were active independent of the mother. Tight network was significantly correlated ($r = .47, p < .01$) with mother's sense of competence. When Abernathy analyzed the six components individually, she found that frequency of contact with her own mother was the strongest single correlate of a woman's sense of competence ($r = .42, p < .01$), while average frequency of contact with network members ($r = .28$) and average distance to network members ($r = .25$) revealed associations in the predicted direction but were not significant. Acquainted pairs in the network, average time network members had known the mother and active pairs in the network were less highly associated with sense of competency. The researcher did find strong correlations between average frequency of contact and physical distance between residences and between physical distance and acquainted pairs ($r = .56, p < .01; r = .41, p < .01$). From the clustering of network variables, the researcher interpreted that the dimensions of social networks relevant to predicting a sense of maternal competence are those most likely to be found in neighborhood associations. Abernathy suggests, "Mechanisms by which a tight network enhances a woman's satisfaction with day-to-day child care range from an actual sharing of responsibilities to the support derived from consensual validation of child-rearing practices and the reinforcement of social identity." (Abernathy, 1973, p. 89).

Garbarino and Sherman (1980) showed that the neighborhood network may also be an important deterrent to child abuse. The researchers matched two Omaha neighborhoods on the basis of socioeconomic and racial
profiles, occupation of inhabitants, education, the number of families with children, size of neighborhood, number of families with working mothers and children under six, number of female heads of households and quantity of dilapidated housing in each. The only major difference between the two neighborhoods was in rate of child abuse. In one neighborhood, there were 130.4 reported cases per 1,000 families and in the other there were 15.6 per 1,000 families. The neighborhoods were dubbed high- and low-risk respectively. Twenty-two families from the high-risk and 26 from the low-risk area were interviewed around a number of variables including the child's social resources, the family's need for social readjustment, the use of help in response to stress, and the mother's ratings of family stresses and supports. A consistent pattern emerged that showed the parents in the high-risk neighborhood were socially impoverished relative to those in the low-risk neighborhood. Of more than 60 t-test and chi square comparisons, over 40 showed the low-risk families had greater support resources. A number of characteristics significantly differentiated the two neighborhoods (p < .05), and families in the low-risk neighborhoods were on the positive end of the continuum in each case. The characteristics included: the number of exchanges among neighbors for child-care and for other resources; the frequency of neighborhood children serving as playmates for one another; the number of persons parents reported who take interest in their child's welfare; whether parent was home when child came home from school; the accessibility of child care; whether the neighborhood was viewed as a good place to raise children, and the belief that their own child was easy to
Polansky, Chalmers, Buttenweiser and Williams (1979) also reported a relationship between parental isolation and child abuse, and Rock (1978) found even gorilla mothers mistreated their offspring when separated from peers. The mother primates, interestingly, resumed normal maternal behaviors when returned to community.

A final role that support may play in connection with parenting is in buffering life events. A life event is defined as a normal and major life change (i.e., job change, geographic move, birth, death of a family member) that carries with it a period of anxiety, vulnerability and a need for reassessment and eventual rebuilding. Outcomes from life events are generally viewed as either positive or negative, with positive representing a future or present-oriented gain perspective (individual feels he/she has gained something of value) and creative resolution, while a negative response is past-oriented with focus on loss precipitated by the event. In their study of life transitions among military families, McCubbin and Patterson (Note 3) found a positive relationship between support systems and creative vs. pathological adaptation to life events. While life event conceptualizations don't focus on parenting behaviors per se they have implications for indirect effects of support on childrearing. Consistent with this argument is Garbarino and Sherman's (1980) finding that parents who were high-risk for abuse had significantly higher life-change scores than the low-risk families. That is, in that study mistreatment and numerous recent life changes were associated with each other. It will also be recalled that the high-risk families had few family supports, so there may be an as yet untangled three-way relationship among
the variables. In any event it is not difficult to see that if support helps people cope with life events, there would be benefits for the children as well.

All in all, there is some evidence that support systems aide parenting by potentially ameliorating the intensity of parenting, by offering resources in feedback and corroboration for practices, by offsetting isolation and by cushioning life changes thereby enabling the parent to maintain mental health. Can a case be made for support helping particularly in the transition to motherhood?

Supports and the Postpartum Period

While the aforementioned studies indicate that on-going maintenance systems may be a requisite for successful parenting, the entry to mothering provides a particular need for support. What are the issues unique to the transition above and beyond those relating to on-going parenting?

Needs of New Mothers

Although there is little agreement on the best framework for characterizing the transition, most observers agree first motherhood is a momentous event in the life of a woman. While marked with great joy, it also involves complex adjustments. So large are the adjustments that terms like "shock" (Oakley, 1980) and "crisis" (LeMasters, 1957) have been applied. In the LeMasters sample of 46 white, middle-class, first-time parents, 83% experienced the transition to parenthood as a crisis.

At least five theoretical reasons for a sense of crisis exist. LeMasters (1957) asserted the predominating reason in his sample was the
gap between expectations and reality. Mothers simply did not know what to expect. Chessler (1980) and Heffner (1978) also have claimed that mothers have no idea of what early motherhood will be like. While Chessler claims there is a conspiracy of silence, Heffner thinks the reason for faulty expectations is that for various reasons motherhood is idealized in industrialized societies. Generalized attention focused on the ideal prevents honest confrontation with and preparation for the reality, she claims.

By contrast, from the psychoanalytic theory is the concept that a lack of preparation only accounts for a very small part of the conflict experienced. Psychoanalytic proponents (Pines, 1978) view first pregnancy as a normal developmental crisis for both mother and father. Bibring (1961) and Osofsky and Osofsky (1980) also regard the transition to parenthood as a developmental crisis. Pines asserts that first pregnancy activates in the mother a wish for mature sexual identity as well as the genuine wish to have a child. However, according to this view, it may also stimulate the renewal of repressed fantasies and conflicts in the mother which may distort subsequent relations with her family, including the new baby (Pines, 1978). Conflicts of the new mother with her own mother which, according to this theory, would have impeded identification with the mother may now rear up and result in ambivalence or anger about motherhood itself.

Sociological views of the transition to motherhood present the idea that the crisis aspect is a function of social context. In industrialized societies first-time motherhood generally represents complete change in a
woman's life. As indicated earlier in this paper, Oakley (1980) identified a number of components of change as frequent accompaniments of new motherhood, any one of which could require considerable adjustment. These components, again, include: entry into full adult feminine role; status change accompanied by covert rites of passage; retirement; occupational career change; change in physical state; motherhood; often surgery, and institutionalization. This quantity of change poses a fundamental threat to a woman's self-identity according to this theory. A mother is at a crossroads whether her identity may be enhanced by her sense of gain by motherhood or undermined by the sense of loss of the old self performing predictably in former roles.

Heffner (1978) agrees that motherhood presents a threat to self but disagrees that it is caused by the quantity of change. Rather, she proposes that threat to self is a universal problem of motherhood—that the demands of children and mother's assertion of an independent self present a natural conflict. Thus, according to this view, crisis in new mothering is a result of the mother's realization of the enormous responsibility presented by the child's dependency. The mother's task, then, is to preserve creatively her sense of self while fulfilling her deep and abiding commitment to the child. Heffner emphasizes her belief that mothers do not wish to escape from the responsibility but to rise to it.

Next, the overload theory posits that because infants require round-the-clock care, generally on a three-to-four-hour feeding schedule, often with feedings lasting an hour, many women find their physical limitations a source of crisis. In a sample of 91 primiparous mothers, Heitler (1976)
reported biological stress, which translated into loss of sleep, was the number one correlate of depressed feelings ($r = .68$, $p < .01$). Situational stresses, such as having just moved, combined to form the second highest correlate ($r = .52$, $p < .01$). Thus, Heitler concluded that work overload is the predominant source of crisis, but added that other stresses add to the potential for overload.

No doubt all or many of the above-mentioned factors contribute to a new mother's adjustment demands. Hobbs and Cole (1976) add to the list of concerns from their descriptive study of 65 primiparous mothers and their husbands. The following were most frequently mentioned by the mothers and are listed in order of importance as issues intrinsic to new motherhood: emotional edginess; frustration with the fall in housekeeping; adjustment to the new work load; worry about loss in appearance, and decreased sexual responsiveness. These researchers asserted that the transition was not experienced as crisis for all new mothers, and they called for research on factors that might account for variance in perceived difficulty.

It is interesting that few of the foregoing mention the challenge of appropriately responding to the infant. Brazelton (1980) does cite the mother's inexperience as a factor in adjustment. In all, he describes a new mother as inexperienced, fatigued and anxious. Anxious (over their ability to provide infant care) was the term British researchers, Ounsted and Hendrick (1977) used to describe primiparous mothers in their sample. Although these researchers did not quantify anxiety, their quantified data do indicate that newborn care may be more challenging than might seem. In this sample of 209 mothers and infants, medical problems occurred in 46%
of the babies and difficulties with feeding were reported by 55% of the mothers. The researchers found considerable variation among the babies in eating and sleeping patterns which accentuated the need of the mother to adapt to the very individual needs of her own baby. Korner (1971) who mounted video tape equipment over the cribs of 32 healthy neonates established there were significant individual differences among neonates including how long and how frequently they cried, duration of waking activity, frequency of shifts of state, frequency of global and diffuse states, and soothability. Thus, every mother must not only learn about "baby care" but also how to meet the very particular needs of her own child.

Altogether in the postpartum period the average mother may need to resolve her feelings about motherhood vis a vis her own mother and her own idealized portrait of motherhood; adjust to numerous role, status and physical changes; begin to resolve the tension between self and a dependent other; adjust to a demanding work load, and finally learn to meet the very individual needs of her own infant. These factors separately and together create a need for support above and beyond those of on-going parenting. On top of all this it really does matter how she performs.

The Importance of Early Adaptation

It is ironic that when the new mother has so many emotional adjustments to make so much is riding on her emotional state and emotional receptivity to the infant. There appears to be a great deal at stake in the early months of the infant-mother relationship. There is considerable evidence that the infant-mother interaction is important to later develop-
ment (Schaffer, 1977). Further, the mother's mental health (Uddenberg, 1974) and her perceptions of her infant (Broussard & Hartner, 1970) appear somewhat to color the subsequent relationship with the child.

Brazelton (1961) studied five infant-mother dyads over a 20-week period and concluded that the mother and child are engaged in establishing rules for their interaction. The mother must learn the limits for expecting attention and responses from the child. She must learn which of her behaviors set up an expectancy of interaction with the baby. She must further learn which of her behaviors "hold" the baby's attention, produce responses, echo his/hers, activate and deactivate the baby. Brazelton further noted that when the balance in interaction was sympathetic to the needs of each member there was a sense of rhythm which was judged as positive, but when the balance did not seem equal, there seemed to be a negative quality about the whole exchange. Generally, practitioners and researchers (Brazelton, 1980; Stern, 1977) have deep concerns over early but unsynchronized interactions between mother and infant. They tend to view these unsynchronous exchange styles as unnecessary, unfortunate and, in some cases, tragic losses of opportunity.

Concern is registered because the infant-mother interaction, particularly the establishment of subtle reciprocal or synchronous communication, is increasingly being advanced as a central adaptation task of early months (Brazelton, 1980; Schaffer, 1977; Stern, 1977). In line with continuity of adaptation theory (Matas, Ahrend & Stroufe, 1978), it may be thought of as a first link in a chain of adaptation quality. Early adaptation quality is hypothesized to more-or-less predominate over
the child's subsequent development despite developmental discontinuities and changing behavioral repertoires.

Specifically, why is early interaction believed to be so important? Newton and Redfearn (1978) propose that the mother-infant dual unit provides the first gestalt experience of self whereby the infant's social and emotional experiences are affirmed. Deficits in interaction may contribute to the infant's failure to establish part-object relations, the result being an ego position alienated from both instinctual processes and any vital experience of self. Along similar lines, Stern (1977) postulates that when the mother is insensitive to the infant by not responding to his communiques, the infant comes to split his internal state from his perception. The child may be capable of perceiving what the caregiver is doing, but events don't appear to influence the internal state. On the positive side, it would follow that the infant who is responded to would be able to experience his perceptions, e.g., hunger, as related to external events, e.g., presentation of food. Stern (1977) has thus postulated such an infant has a sense of effectance, and Bell and Ainsworth (1972) further propose the sense of effectiveness establishes the framework for understanding means-ends relationships.

Blehar, Lieberman and Ainsworth (1977) also advance the idea that successful interaction teaches the child he/she can depend on the caretaker and allows the child to form an attachment to that individual. The investigators analyzed 732 episodes of face-to-face interaction between mothers and their 6- to 15-week-old infants and found significant relationships between qualities of early interaction and attachment at
one year. Infants securely attached had mothers who had provided significantly ($p < .05$) more contingent pacing, playfulness, initiation of interaction with an animated face, encouragement of further interaction and responsiveness to baby's communicative gestures. Ainsworth reported a similar relationship between maternal contingent responding and attachment in both Ugandan (Ainsworth, 1967) and American samples (Ainsworth, Bell & Stayton, 1972).

Bruner (1975) also has hypothesized that successful interaction between mother and infant provides a framework for learning increasingly complex forms of communication, including language. Bell and Ainsworth (1972) found that mothers who picked up their babies when they cried in the first quarter of life had babies who cried less in the second quarter and communicated in the fourth quarter using communicative behaviors other than crying in higher frequencies than babies whose crying had not been responded to. In a sample of preterm infants and their mothers Cohen and Beckwith (1979) found that receptive language at age two, together with Gesell and Bayley D. Q. scores at that age, was significantly correlated with the mother's prior use of affectionate touch, social play, contingent vocalization and gaze at baby.

Signs of maladjustment to early motherhood have been linked to later difficulties. Uddenberg (1974) studied 69 mothers in connection with their first postnatal period and followed them up four and one-half years later. In the sample were 16 mothers who had been severely mentally disturbed postpartum as determined by clinical assessment. They were compared to those in remaining portions of the sample who did not have
disorders. The disturbed subjects were significantly more likely to report a poor relationship with their child; they were more likely to have a rejecting attitude towards the child and to be described negatively by the child at the four-and-one-half-year point.

A negative perception of the new baby may lead to difficulties later. In 1961, Bibring hypothesized that disturbances in a mother's early attitude towards her baby may lead to chronic disturbances in the mother-child relationship. Broussard and Hartner (1970) reported mothers who ranked their newborns as average to high-risk on the Neonatal Perception Inventory made similar judgments about their children four and one-half years later. The researchers concluded that either the infant's personal characteristics were perceived accurately very early in the relationship or the expectations the mother held out for the infant became a self-fulfilling prophesy. It is important to note, however, that Palisin (1980) was unable to replicate Broussard and Hartner’s results in a sample of 50 Seattle primiparous mothers who were similar in all respects to the original Pittsburgh sample.

While it is apparent the mother needs to be accepting and sensitive to the infant, it is less clear how her ability to respond is related to her general adjustment to motherhood. That is, it is not clear whether adjustment in interaction with the baby and to motherhood in general constitutes one, two or several factors. Most researchers seem to prefer parsimony, but it is just not clear as yet whether mothers fall into two simple categories of adjusted and nonadjusted.
Brazelton (1980) assumes a direct connection between the mother's moods and her ability to respond to the baby. Depression, he states, is bound to undermine the interaction. Stern (1977) concurs indicating the depressed mother may not be able to light up her voice to offer the baby the necessary "envelope" of stimulus intensity and contour to influence the infant's attention. The empirical support for a relationship between depression and interaction is less equivocal. However, such research meets with numerous difficulties of construct definition and measurement. Livingood (1977) compared 25 depressed, as determined clinically, to 25 control mothers on levels and quantity of stimulation provided for their newborns during a feeding situation. Depressed mothers provided significantly lower levels of unconditional regard and less continuity in rocking their infants but were no different from nondepressed mothers on other levels of stimulation. Post hoc analyses of the group extremes revealed depressed mothers gazed significantly less at their infants. The researcher's interpretation was that depression may influence social interaction but not caretaking per se. There is clearly a need for more studies to determine the interrelationships between infant-mother interaction and postpartum depression.

To complicate matters, British sociologist, Oakley (1980) argued that there are really four "depression" variables which she identified as blues (sadness in the perinatal period); anxiety; depressed mood (intermittent depression) and depression (continuous feelings of depression). She examined interrelationships among these four together with satisfaction with motherhood and feelings for the baby as outcomes in her
study of primiparous British mothers. Depression correlated ($p < .001$; $r$ not reported) significantly with satisfaction with motherhood but was not related to any of the other variables. Depressed mood was significantly correlated ($p < .05$; $r$ not reported) with both anxiety and blues, but the latter two were not significantly related to each other.

Although there were relationships in the predicted directions between feelings for the baby and other outcomes, they were not significant. It is interesting that Oakley who initially argued for a multi-factor approach to the study of postpartum outcomes, subsequently identified her subjects, summarily, as either victors or victims of childbirth, with victims having been those experiencing either depression or depressed mood.

In sum, most researchers appear to assume that postpartum variables are interrelated but for the most part that assumption hasn't been tested. Delineating postpartum mothering factors will be helpful in the quest for establishing the long-term importance of mothering outcomes. Nevertheless, there are some indications that poor quality of adaptation between mother and infant and within the mother have negative implications for subsequent development. Inability to establish synchronous interaction, a negative perception of the child and severe depression all appear to put the child's optimal development in jeopardy. It would certainly seem that whatever could be done to enhance the early adjustment would be well worth the effort if in fact outcomes were amenable to influence.
Influences on Mothering Outcomes

Mothering outcomes do appear to be amenable to influences, some of which can be manipulated and some of which cannot. The latter group includes qualities intrinsic to the baby and/or mother such as temperament, baby's sex, and mother's age, while the former group includes birth and hospitalization procedures as well as support during the early postpartum period. The discussion that follows will focus on this complex collection of factors. It will be organized around influencing factors rather than outcomes because outcomes tend to be defined so differently across studies whereas there is some cohesiveness in defining most influencing factors (with the exception of supports). Literature pertaining to support, of primary interest here, will be presented first. Altogether, it is difficult not to get the impression that outcomes in the postpartum period are extremely malleable, that the new mother is very impressionable, and that this fluidity could work either for or against establishing a framework for optimizing future development.

Postpartum supports. Supports of various types have been studied in relation to postpartum outcomes. There is considerable variation among studies as to what constitutes a support and in how outcomes are measured. It does appear that social contact and specific supports from husband, mother's mother, extended family, neighbors and experienced others help in regards to selected outcomes. There have been no studies focused on social network supports per se or that have included infant-mother interaction as an outcome.
The most comprehensive study of the role of support in postpartum outcomes recently was reported by Oakley (1980). This study introduced the "sociology of childbirth" as a discipline. Oakley's sample consisted of 55 British primiparous mothers who were interviewed twice during pregnancy and twice afterwards, the final time at five months postpartum. Oakley assessed the relationships among some 30 potential influencing factors and six outcomes which were described early (blues, anxiety, depressed mood, depression, maternal satisfaction and feelings towards the baby). Oakley drew two sets of conclusions. First, individual chi square analyses were performed to determine relationships of the 30 influencing factors to the six outcomes. Because those results were lengthy and complicated, they won't be reported here. Rather, the second, more general, set of conclusions will be discussed.

Oakley identified from her sample mothers who had experienced no depression or depressed mood. These women were identified as victors of childbirth while those who had not been so fortunate were dubbed victims. She then identified four factors she called supports: a helpful husband, absence of housing problems, a part-time job, and experience with infants. She found that not a single mother who had all four supports was a victim of childbirth while 100% lacking all four were victims as she had defined them. Additionally 70% of the mothers lacking three supports were victims, and of those having only two supports 53% were victims, while 20% of those missing one support were determined to be victims. Oakley used her data to argue that it is correctable and circumstantial factors rather than factors intrinsic to new motherhood that cause negative out-
comes, and she argued that these factors could be offset by intelligent handling and support.

Most studies focus on the influence of a single support at a time and so perhaps are easier to follow. Husband support has been somewhat investigated. While there is face validity for the idea that having a supportive husband during postpartum is important to maternal adjustment, the literature is equivocal. Livingood (1977) found a nonsignificant relationship between level of marital adjustment and maternal behavior with the infant but cited measurement difficulties as the reason for the nonsignificance. Similarly, Janis (1977) found no differences on the Midi-Multi Pre-and Post-Natal Adjustment Scale as a function of husband supportiveness ratings. There were no differences between supportive and nonsupportive husband's scores in relation to congruency with wife in childrearing, or childbearing values or on husband's feminine traits. Thus, the investigator was unable to find an explanation for husband supportiveness or to link supportiveness to maternal adjustment. She attributed these failures to sample bias, as she had recruited 41 of the 50 primiparous couples from Lamaze classes. However, the general trend in the literature, according to a review by Livingood (1977), is that husband support does augment adjustment. In the Oakley (1980) study having a helpful husband was one of the four supports associated with avoidance of depression. Further, Gray, Cutler, Dean and Kempe (1980) listed an unsupportive husband as a warning sign of the potential for later parental child abuse.
Husband support may not be enough, however. Often the mother's mother emerges as an important support during the postnatal period. Simultaneously and paradoxically, support from her own mother may allow the new mother to express dependency needs and to gain a new status vis-a-vis her mother. Heffner (1978) explains that any life event brings out a need for the affected individual to express dependency needs. However, new motherhood offers a particular challenge because the primipara both needs to mother and to be mothered. Her own mother may be one of the few persons to whom the primipara feels comfortable expressing these seemingly contradictory needs. To this point Chessler (1980) asks, "Who else can you count on?" Many women become closer to their own mothers during first pregnancy and early motherhood. Thus, the study by psychologist Judith Ballou (1980) of 12 women prior to and after birth follows. These women changed their feelings towards their mothers during the pregnancy and birth. Says Ballou, "As her pregnancy progresses a woman comes to see her mother more and more as someone who is good and giving. The pregnant woman who has for all her life been the 'child' now becomes the 'mother' and is faced with confronting her own mother as an adult equal" (p. 45).

The American tradition of a mother's mother assisting the primipara in the immediate postpartum period is not uncommon. Although there have been no studies reported of the influence of exclusive maternal grandmother support, there is a study (Bowker, 1977) that suggests simply having a supportive someone in the early postpartum period is important. In Bowker's study of 50 primiparous mothers, 66% had had such a person
assisting. The couples who had not had a third person helping during the first week were judged to be in a poorer state of adjustment as determined by clinical criteria at three months postpartum compared to those who had been supported. The nonsupported families showed, according to the researchers, signs of physical and emotional overload. Interestingly, in their interview study, minus statistical analyses, Jaffe and Viertel (1980) suggest the introduction of a third person may actually impede the adjustment with a new baby. The argument against introducing the third person is that this person may create dependency needs in the new parents and may interfere with the husband-wife intimacy in becoming acquainted with the baby. If the couple does have help, it is interesting that the primipara's mother-in-law may not be a good choice. Russell (1974) indicated that mother-in-law interference was a major frustrating factor among primiparous mothers in his study.

Not always stay-in but simply accessible help may be important. Carveth and Gottlieb (1979) assessed the role of neighborhood support in a sample of Canadian new mothers. In this study, support was indentified as neighborhood attachment and participation in voluntary organizations and the dependent measure was the Perceived Stress Index. Those with supports indicated they experienced almost no affective change as indicated by the Stress Index scores. The researchers concluded that the contacts had been effective in maintaining psychological equilibrium. They added that contact with a particular significant other buffers the individual from subjectively experiencing the birth as a life event that is stressful. In a review of informal support system literature, Hough and
Stevens (1981) concluded that even though extended family appears to be the most utilized source of informal support, friends and neighbors are also important supporters.

Support may be important in establishing specific aspects of new mothering. Heath (1976) attempted to determine the role of support and information on breast-feeding success. Her sample was 54 primiparous mothers who planned prenatally to breast feed. Twenty-seven of these were successful as defined by their continuation of breast feeding at three months postpartum and 27 were not. Every successful breast-feeding mother had an individual who was an accurate source of information and support whereas only one-third of the mothers who had ceased breast feeding had this form of informative support.

Having a support person may similarly facilitate success in the birth experience itself. Twenty Guatemala City mothers who had someone at their side during labor were compared by Sosa, Kennel, Klaus, Robertson and Urrutia (1980) to 29 who had not. The 20 supported mothers averaged labors that were half as long as those of the nonsupported mothers. They also talked to their babies more in the first 45 minutes after birth and smiled at them more.

It may be interesting to take note of the kinds of support systems provided in other countries. The American doctor, Brazelton (1980), has been outspoken in calling for greater support for new mothers parallel to the types he has observed elsewhere, notably in less developed countries. He cites Mexico where women of the family wrap the new baby with the mother and do not leave the two alone until routines and baby's ability
to signal needs are clear and determined. Similarly, the Greek have a
term for the person who supports a new mother in the postpartum period.
This person is called a "doula." Numerous persons have suggested initi­
ating hospital-employed doulas in this country. Only one study was
found, however, where doulas were actually employed (Brown & Hurlock,
1977). Nurse-doulas in a Canadian hospital visited 60 mothers daily
during hospitalization and every other day for three weeks after dis­
charge. Mainly the nurse-doulas observed for breast-feeding problems but
also discussed all manner of concerns with the mothers. Unfortunately,
there were no hard data evaluating outcomes, but the nurses and mothers
both reported the support had had a positive effect.

A number of other factors, in addition to support, have been found
to influence mothering outcomes. Due to the length of this review, only
conclusions pertaining to these factors will be presented. These other
factors may be categorized into three groups--factors having to do with
policies and programming, factors intrinsic to the mother, and factors
intrinsic to the baby.

Policy and programming factors. Policy-based or programming factors
found to influence mothering outcomes include birthing procedures;
extended early contact, and early parenting education.

Although the focus in the present paper is with postpartum factors,
it needs to be noted that effects of birthing procedures appear to carry
into the postpartum period. Oakley (1980) found more postnatal blues
among mothers who had large amounts of analgesics, high birth technology
(e.g., use of forceps), and who felt they had low control over the labor.
Along similar lines, Sugarman (1977) reported less maternal interest in the infant after long labors. Sugarman in reviewing the birthing literature indicated there was less infant-mother interaction following labors where drugs were used. It appears that difficult labors and anesthesia alter the state of both infant and mother, interfering with their ready mutual engagement. How the baby looks may influence the mother's feeling for him/her too. The baby's appearance is one explanation for Blumberg's (1980) finding that mothers who had had Cesarean sections as compared to those who had delivered vaginally had more positive perceptions of their newborns during the antepartum hospitalization period.

The events immediately following the birth, such as whether mother and infant have immediate postbirth contact, may influence mothering also. Early contact involves from 45 minutes (Hales, Lozoff, Sosa, & Kennell, 1977) to one hour (Kennell et al., 1974) of skin-to-skin contact immediately after birth. In one study (Kennell et al., 1974), early contact also included extra contact throughout the hospitalization period. Mothers who have extra contact have been found to spend more time holding infants, looking and smiling at them at three days postpartum (deChateau, 1976); to have more affectionate behavior at five days (Hales et al., 1977); to stand closer, pick up crying infants more, stay in the en face (face to face) position more, and fondle the baby more at one month (Kennell et al., 1974); to look more, kiss more and to clean less at three months (Kennell et al., 1974); to be more attentive during a pediatric office visit at one year (Kennell et al., 1974), and to use richer language, more words, and more questions at two years (Kennell et al., 1974).
The value of extra contact has sometimes been attributed to the existence of a sensitive period for infant-mother bonding (Kennell et al., 1974). Alternatively, because the infant is particularly alert immediately after birth (Sugarman, 1977) and because mother is likely to be roused from the birth experience, if she hasn't taken drugs, both are prime for exchange, more so than might be true later. It is also possible that when the doctors and nurses present the baby to the mother to encourage bonding they are also sanctioning general motherliness in a way that may be unique in the nursery where routine caretaking activities tend to predominate. It is important to note that not every study has found long-lasting effects for early contact (Campbell & Taylor, 1980), however, early contact time is now encouraged in many hospitals.

A third programming influence is early parenting education. Both television guidance offered in the hospital during the immediate postpartum period (Broussard, 1976) and training in infant stimulation (Schwartz, 1978) have been associated with positive outcomes. In the former case, mothers in the experimental group had more positive perceptions of their infants than control mothers and in the latter case trained mothers when compared to controls had greater contact, better perceptions of the babies, more active and alert babies and higher Home Observation for Measurement of the Environment scores a month after training. While there are many new-parent education programs currently in practice, the effects of most have not been systematically evaluated (Joy, Davidson, Williams, & Painter, 1980).
Mother's characteristics. Factors intrinsic to the mother also influence outcomes. A mother brings a wealth of attitudes and experiences to new mothering. Mothers with hostility towards their own mothers have been found to have more postpartum depression (Heitler, 1976) than non-hostile mothers while mothers who were separated from their parents as children had a higher incidence of difficulty in infant management, in their marriages and also had more depression (Frommer, 1973) than controls. Uddenberg (1974) found that when a mother had ambivalent feelings towards reproduction, her own mother was likely to have those kinds of problems as well, however, Goyseyeff (1977) found no relationships between conscious and unconscious attitudes towards the pregnancy and postnatal adaptation.

Other characteristics indigenous to the mother are her age, social class and parity (whether first or later birth). Blumberg (1980) found age to be positively correlated with postpartum anxiety, but Ballinger, Buckley, Naylor and Stansfield (1979) reported age was not a significant correlate of emotional disturbance five days, one month or one year after birth. Social class was not a significant correlate of emotional disturbance either in the Ballinger et al., study (1979). However, Field and Pawlby (1980) found differences in infant-mother interaction as a function of social class. They found middle-class mothers of four-month-old babies used more distal interaction (talking from across a room) than did working-class mothers. Lewis and Wilson (1972) reported middle-class mothers were more likely to respond to their infant's vocalizations with another vocalization, however, these researchers found no difference in
total frequency of vocalizations. Farran and Ramey (1980) found no social-class difference in dyadic involvement at six months but did at 20 months suggesting that working-class mothers shy away from interaction as the child gets older but are no less involved initially. Tulkin and Cohler (1973) reported middle-class mothers were more consistent in attitude and behavior, e.g., they were more likely to say they encouraged reciprocity and to actually encourage that behavior, than was true for working-class mothers.

Parity wasn't significantly related to emotional disturbances in the Ballinger and associates (1979) study reported above, however, there is general agreement in the literature that the factors impacting primiparous mothers are different from those affecting multiparas, thus, it is a constant in most studies. Parity appears to be an influence on the mother's interaction with the child. Mothers spent significantly less time in interaction with second borns (Jacobs, 1976), particularly so when the children were girl-girl combinations, and primiparas have been reported to spend more time feeding and to give more total feedings (Thoman, Barnett & Leiderman, 1971) than multiparas.

Factors intrinsic to the baby. Infant characteristics influencing postpartum outcomes have included the baby's sex, temperament and birth condition.

Lewis (1972) emphasizes that findings on sex differences are contradictory. Boys and girls may give different cues and thereby elicit different responses, but there are not enough data to say conclusively how differences influence maternal behavior. Further, sex differences may
confound with other factors such as parity. Moss (1964) found boys were more difficult to soothe while Thoman and associates (1971) found primiparous mothers stimulated, smiled and talked more to female than to male infants. Lewis (1972) also found mothers were more vocal to female infants at three months. Mothers have been more likely to breast feed girls (Oakley, 1980) but Jacobs (1976) found significantly less caretaking given to girls if they were second born.

In the Oakley (1980) study mothers of girls had significantly less positive feelings about their babies than did mothers of boys. Oakley interprets that because culturally boys tend to be valued more than girls, mothers of girls register more disappointment. Murphy (1962) hypothesized that there is less postpartum depression among mothers of boys because mothers feel less controlling of boys. Maternal behavior towards boys, it is argued, is patterned by a respect for the child's autonomy that is absent from mothers' relationships with girls. No data were found, however, linking postpartum depression differentially to sex of baby.

While every mother needs to adapt to the individual needs of her particular baby, some babies may be easier to mother than others. Infant's temperament and condition at birth appear to influence the mother's state and her interaction with the baby. As reported earlier (Korner, 1971) newborns have been found to vary, as determined from observation of continuous perinatal video taping, according to irritability, soothability, wakefulness, and rapidity of state changes. Irritability and soothability, particularly, have been related to maternal variance. Korner emphasizes, "The mother's capability in
soothing her baby is one of the cardinal challenges she faces in the infant's earliest weeks of life, and her success or failure cannot help but leave an impact on her feelings of effectiveness and competence as a mother" (p. 108). A number of studies support Korner's contention. Mothers of irritable infants have been found to have a less comfortable adaptation to the maternal role and to have less reciprocity in feeding (Sargent, 1977). Prechtl (1963) made the amazing report that he and his co-investigators "often became annoyed" with the infants who cried more than normal and who showed sudden state changes. Mothers too have been found to react differentially to infants on the basis of muscle tone and posture (Osofsky & Conners, 1979), state range (number of states infant exhibits) (Brazelton, 1961), and infant activity level (Fries and Wolff, 1953).

The baby's condition after birth appears to have both direct and indirect effects on the mother's reaction. Blumberg (1980) found higher levels of neonatal risk were related to higher levels of depression as measured by the Depression Check List, to higher levels of anxiety, as measured by the State-Trait Anxiety Inventory and to negative perceptions of the newborn as measured by the Neonatal Perception Inventory. Delivering a baby which is at-risk is bound to bring on feelings of worry and discouragement, however, there may be some continuing effects due to how the baby, once available for interaction, responds to the mother. Bakeman and Brown (Note 5) hypothesize that preterm babies, low-risk as well as high-risk, have different interaction patterns from normal babies.
Altogether, considerable credence is now given to the notion that the mother is influenced as greatly by the infant as vice versa. This is the premise behind the now well-known volume by Lewis and Rosenblum, *The Effect of the Infant on its Caregiver*. Additionally, says Schaffer (1977), "Parents and infant operate within a system of mutuality where the behavior of one produces effects on the other that in turn modify the behavior of the first. From the beginning the baby is active, not passive, and even to his earliest social interactions he brings certain characteristics which will affect the behaviors of others towards him" (p. 23, 24).

**Summary**

In sum, the literature pertaining to the postpartum period suggests viewing the time as a period of complex personal changes for the mother which interact with normal biological stresses of birth and sleep loss. These factors impinge above and beyond those of normal childrearing. The new mother's task is to adapt to the individual demands of her baby, establish synchronous interactions, and to emerge with a sense of integrity about herself as mother with some cohesiveness in terms of her former identity.

Just how well she makes the transition and becomes a "victor" as opposed to a "victim" (Oakley, 1980) of the experience is influenced by myriad factors, some of which can be controlled and some of which cannot. Qualities of the infant--including his/her temperament, condition at birth, and sex--together with mother's repertoire of attitudes towards motherhood and feelings about her own parents all appear to influence
the outcome. A picture does begin to emerge, however, that suggests social factors can be manipulated to produce better or worse outcomes for the mother and infant. By allowing her to have maximum control over the labor, minimizing birth technology and analgesics, by allowing for extended early contact when the baby is perceptually alert, and by providing numerous helps loosely lumped together under the rubric, "supports," the chances for a "victory" are enhanced. Supports for breast feeding, neighborhood contacts, immediate postpartum visitation by extended family members, husband help, training in infant care, a job to return to have all been found to cushion the impact of the transition. While most researchers seem to assume their indice represents "victory" or adjustment, the relationships among postpartum outcomes are not at all clear. Similarly, the relationships among supports aren't clear. Thus, from the existing literature it is not possible to totally elucidate the roles of supports in effecting differential outcomes differentially.
PROCEDURE

The major purpose of the study was to determine if there were differences in mothering outcomes between mothers having, and those not having, network supports. It was of secondary interest to determine if network supports were related to one another and to determine if mothering outcomes were related to one another.

Subjects

Forty-two mothers of four-month-old infants participated in the study. The sample procurement procedure was approved by the Institutional Review Board, Iowa State University, prior to contacting subjects. Mothers were identified from birth announcements appearing in local newspapers. They were contacted by telephone and invited to participate in the study if they met the following criteria: first baby (primiparous birth); normal pregnancy and delivery; infant birth weight over five pounds; mother's age between 18 and 35; marriage intact; mother not employed during the first three months after infant's birth. Primiparas were targeted because their support needs were believed to be different from those of multiparas (Brazelton, 1980). The other sample restrictions mentioned above were entered as controls on factors that potentially could confound with the need for support or with mothering outcomes (Osofsky & Conners, 1979). Attempts were made to balance the sample for baby's sex (boys = 20; girls = 22) and mode of feeding (breast = 22; bottle = 20). Refusal rate was approximately 25%, and most of the mothers who declined to participate in the study stated they
objected to being video taped. This reason was cited particularly, but not exclusively, by breast-feeding mothers.

Instruments

Subjects completed the Perceived Support Questionnaire and participated in a semi-structured interview to assess network supports. They also completed the Perceptions of Motherhood Questionnaire, were observed in their homes according to criteria provided by the Home Observation for Measurement of the Environment, Section 1 (Caldwell et al., Note 2), and were video taped for ten minutes while feeding the infant. The latter three measures assessed mothering outcomes. Background data pertaining to mother's age, education and income, as well as baby's sex and mode of feeding were also assessed.

Perceived Support Questionnaire

Upon agreeing to participate in the study mothers were mailed a letter summarizing the study (Appendix A) and the Perceived Support Questionnaire (Appendix B). The PSQ served as an opening with subjects prior to the later and more intense interview. The questionnaire took about 20 minutes to complete. The PSQ is an assessment of mother's perception of the support she received from one-to-one relationships with relatives and friends. The PSQ includes three components of Dyadic Relations, the extent to which mother felt she could prevail upon her friends and relatives to get her needs met (Intensity), her impression of the supportiveness of her relationships (Directedness), and the actual content of the support they provided (Content). (Items for the PSQ as
they correspond to variable components are located in Appendix C.)
These were measured by mother's responses to nine-point Leikart-type scale items.

The PSQ was developed for the study by asking mothers about their support needs. The PSQ development proceeded as follows. 1) A list of potential support needs (located in Appendix D) was mailed to 50 mothers of three-month-old babies in the Lincoln, Nebraska, area who were asked to review the list, to add other items if necessary and then to rank-order their top ten physical support needs and their top ten emotional support needs. None of these mothers was in the final sample. 2) From the 46 rank-ordered lists returned, the 12 most frequently mentioned support needs in each category were determined. These were incorporated into the PSQ together with general questions pertaining to supportiveness of relationships. 3) the PSQ then was submitted to three professionals in child development who offered comments on its clarity and form. 4) Nine first-time mothers, not in the study sample, completed the PSQ and provided feedback on ambiguous questions and time required for completion. 5) Changes from the piloting included dropping one item and rewording instructions on three items.

Interview

When mothers returned the PSQ, they were contacted for interviews. Interviews were conducted in the mother's home and took approximately an hour. The following network supports were determined from the interview: Size, Access (composed of Proximity, Similarity, Continuity and Frequency of contact), Community participation, and Rituals participation. The
general technique was to ask a mother to name all her support persons. A total count determined network size. Then she was asked to classify support persons according to Proximity, Similarity, Continuity of relationship and Frequency of contact. For example, after naming a support person, a mother would be asked, "Where does he/she live? What is your relationship to him/her? Does he/she have children? How long have you known him/her? How many days in the week have you had contact with him/her?" The technique was similar to one used by Garbarino and Sherman (1980) in their assessment of network supports pertaining to child abuse. Mothers also were asked about their community involvement and about customs and rituals in which they participated. (Interview items are located in Appendix E.)

The interview was developed for the study. Procedures in its development included the following. 1) Questions were extended from the Cochran and Brassard model (1979) and adapted from a network assessment questionnaire obtained from Garbarino and Sherman (1980). 2) Interviews were piloted with five new mothers who were not in the target sample. These mothers were asked to give feedback on questions that were difficult to answer and to comment on the importance of questions. 3) The interview was adapted to accommodate mothers' feedback. From the results of the pilot, it became clear that the few persons mothers regarded as their support persons were qualitatively different from the overall category of friends and acquaintances and that information about those support persons was more important than the same information about the many persons the mother knew. Defining support persons as comprising the social network
was not dissimilar from a conceptual tool used by Garbarino and Sherman (1980) who asked their subjects to name the ten most important persons to them and from an approach used by Abernathy (1973) who asked her subjects to identify the four most important persons in their networks. It also became apparent in the pilot interviews that by describing the helps rendered by the support people, the mother did not need to wend her way, support-wise, through the entire time period since the baby's birth. The latter procedure, which had been the approach in the first pilots, had been extremely time consuming.

Perceptions of Motherhood Questionnaire

The Perceptions of Motherhood Questionnaire (PMQ) was developed to assess two mothering outcomes: Perception of the Transition and Perceived Competency. The PMQ consisted of 12 items (six for each outcome) and took subjects about five minutes to complete. Responses to each item were scored on a nine-point Leikart-type scale. (The PMQ is in Appendix F.)

The PMQ was developed for the study because there are few instruments available for assessing maternal postpartum outcomes. Advantages of developing an instrument specifically for the study were that the questions of greatest interest could be asked; the PMQ was brief, and, compared to the few other assessments of maternal outcomes, questions asked of mothers about their feelings were direct rather than indirect. The following procedures were used in developing the PMQ. 1) Several new mothers, not in the target sample, were asked what factors were important to them as signs of well-being in the early mothering period. 2) Four
child development professionals were asked to comment on the dimensions of competency and on important outcome factors they believed were likely to be influenced by support or lack of it. 3) Items generated from these discussions were incorporated into a ten-item questionnaire which was piloted with five new mothers not included in the target sample. These mothers were asked to comment on which items were difficult to respond to or seemed unimportant. 4) Three individuals were then asked to comment on the questionnaire for its clarity and form. 5) Finally changes were made from the pilot and from other feedback. A question which several mothers found difficult to answer was eliminated, and three questions were added—one pertinent to the difficulty of the first month particularly, one to the enjoyment of the baby, and the third to whether, overall, early mothering was rewarding or frustrating. The last item was added to cover the contingency that a mother could have negative rankings on items pertaining to difficulty of adjustment and still regard the period as rewarding. It also became apparent from the pilot that there was a need to differentiate the first month from others as supported mothers received much of their help during that first month. Finally, an item inquiring about enjoyment of the baby was added as respite from the self-evaluating tone of the PMQ.

Infant-Mother Interaction Measures

Osofsky and Conners (1979) recommended using analyses at both molar and micro levels when assessing interaction between the infant and mother. Molar-level analysis is an assessment of the interaction according to broad parameters such as warmth and positive tone, while micro-level
assessment refers to measurement of second-by-second behaviors. Thus, two measures of Infant-Mother Interaction representing these two levels of analysis were included in the study.

HOME MERV. The molar-level procedure selected for the present study was Section 1 of the Home Observation for Measurement of the Environment (HOME) (Caldwell, Heider, and Kaplan, Note 2) entitled Maternal Emotional and Verbal Responsiveness (MERV). The items are in Appendix G. The total HOME scale has been used as a scale of interaction by Ramey, Farran, and Campbell (1979). However, the first subscale, MERV, seems particularly to assess the interaction and for that reason the HOME MERV was singled out from the HOME overall for inclusion in the present study. Bakeman and Brown (Note 4) have also used the HOME MERV as a molar measure of the interaction between mother and baby. The HOME MERV includes 12 binary-type (yes or no) items obtained by observation of infant and mother together, resulting in a single score. That is, mother is scored as to whether she does or does not perform the indicated behaviors. Only ten of 12 HOME MERV items were used as two were judged to pertain to mothers of babies older than sample infants.

The HOME scale for all six sections has an internal consistency based on split-half reliabilities of .89 (Elardo, Bradley & Caldwell, 1975). Hollenbeck (1978) recently completed a cross-validation study and replicated the test authors' findings regarding reliabilities and concurrent validity. He concluded from his replication that the HOME is a reliable and valid measure. It has been used extensively in studies of infant-mother relationships (Bakeman & Brown, Note 5; Ramey, Farran &
Campbell, 1979) although prior to the present study, only Bakeman and Brown (Note 4) have also singled out HOME MERV.

To establish HOME MERV observer reliabilities for the present study, a second observer accompanied the investigator on five of the interviews. Inter-observer reliability, computed by dividing number of agreements by number of disagreements plus agreements (Farran & Ramey, 1980), was 94%.

**Synchrony.** The micro-level procedure used in the study involved assessment of ten minutes of videotape of mother and infant interacting during feeding using a procedure developed by Karger (1979) as a measure of Synchrony. The procedure used in the present study was identical to that developed by Karger except that instead of using data-mytes for instant coding of infant and mother behaviors, video taping was employed and instead of correlation coefficients, percent agreements were used as final scores.

The Karger Synchrony (1979) analysis is based on a coding system of 30 infant and 42 mother communicative behaviors identified by Bakeman and Brown (Note 5). (For a complete list of these behaviors see Appendix H.) Each infant-mother dyad was given a Synchrony score thusly computed. First, each observation was divided into five-second frames. Second, each frame was classified as (I) infant alone, (M) mother alone, (C) mother and infant co-acting and (Q) quiescent on the basis of whether any of the infant and/or mother communicative behaviors occurred during the frame. Third, a total of 108 time frames were segmented into six 18-frame segments and in each segment the number of frames containing mother communicative behaviors was enumerated producing six values
representing maternal states of communicative behaviors. Fourth, the same was done for infant states producing six infant scores. Finally, using the Karger procedure the Synchrony score was then to be computed by correlating infant and mother scores. However, because a number of the scores of the infant and mother communicative behaviors were at ceiling levels, there was too little variance of scores to permit error-free computations for coefficients of correlation. Therefore, Synchrony scores were determined by computing percent agreement of infant and mother communicative behaviors where agreement was the common number of frames with communicative behaviors for infant and mother totalled. For example, if a mother's scores were 18, 10, 10, 10, 10, 10 for the six 18-frame segments and the baby's scores were 10, 10, 10, 10, 10, 10, the Synchrony would be 60/8+60 or .88. (The 60 represents the totaled number of frames mother and baby had in common for communicative behavior.) This procedure is the same one used for computing observer and rater reliabilities.

The establish rater reliabilities for the Synchrony measure, a second rater coded the first 18 frames of each of the tapes and inter-rater reliability was computed by dividing the number of agreements by disagreements plus agreements (Farran & Ramey, 1980). Reliability based on 586 mother and 644 infant behaviors was 92.3% for mother behaviors and 94% for infant behaviors and 93.3% overall. Based upon these reliabilities, a decision was made to use only the first observer's ratings for analysis.
Procedure Summary

Forty-two primiparous mothers completed five assessments to determine relationships of network supports to mothering outcomes. The five assessments were the PSQ and an interview to assess network supports, the PMQ, the HOME MERV, and a micro analysis of ten minutes of Synchrony during feeding to assess mothering outcomes. Altogether, the PMQ, the HOME MERV and the Synchrony measure yielded six scores for Perception of the Transition, six scores for Perceived Competency, and two for Infant-Mother Interaction. Also assessed were the background variables of Sex of child, Breast vs. Bottle feeding, Age of mother, Education of mother, and Income of family.

Analysis

The following terms will be used in describing the analysis. Mothering outcomes are Perception of the Transition, Perceived Competency and Infant-Mother Interaction. Measures of these outcomes are the dependent variables. There are six measures of Perception of the Transition, six measures of Perceived Competency and two measures of Infant-Mother Interaction making 14 dependent variables for analysis. The 14 dependent variables are referred to as measures of mothering outcomes or as measures. Network supports (Size, Access, Dyadic Relations, Community, and Rituals) are the independent variables. Background variables (Sex, Breast vs. Bottle, Age, Education and Income) also are treated as independent variables in analysis.
There were three sets of analyses. First, Pearson Product Moment (PPM) coefficients of correlation were computed to determine the internal consistency of network supports and mothering outcomes. Second, to determine if the network supports and background variables were significantly correlated with one another and to determine if measures of mothering outcomes were significantly correlated with one another a second set of PPM coefficients of correlation was computed. Finally, separate analyses of variance were performed to determine if mothers who had high levels of network supports and varying levels of background variables had significantly different scores on the measures of mothering outcomes from the mothers at other levels. When both a background variable and a network support were significant for the same mothering outcome measure, two-factor analyses of variance were computed to determine which had the stronger effect.
RESULTS

Analyses of variance were performed to determine if there were differences in mothering outcomes between mothers who had, and those who didn't have, network supports. To determine if these differences existed was the primary purpose of the study. Secondarily, correlational analyses were performed to determine if mothering outcomes were related to one another and to determine if the network supports were related to one another.

It was necessary to find a way to divide the independent variables into discontinuous levels for the analyses of variance. The procedure selected involved combining qualitative and quantitative criteria. Quantitative criteria were based on the traditional analysis of variance median split (Ault, Mitchel & Hartmann, 1976). It is acknowledged that other statistical treatments, e.g., multiple regression, or other criteria for creating high/low divisions, e.g., using only quantitative or only qualitative criterion, may have yielded different results. Multiple regression was rejected due to the small sample size. Combinations of quantitative and qualitative criteria were used for high/low division for the sake of reliability of category-inclusion as well as to represent conceptual bases of variable formation.

The independent variables were the five network supports—Size, Access, Dyadic Relations, Community and Rituals—and the five background variables—Sex of child, Breast vs. Bottle feeding, Age, Education and Income of mother. Division for analyses of variance proceeded as follows. (Criteria for division are summarized in Appendices I and J.) Size,
based on quantitative data, was split at the median (five and above, high; four and below, low). Dividing Access, Dyadic Relations and Community was more complicated because each had been formed by combining several indices of qualitative and quantitative types. High-Access mothers were designated to be those who met the qualitative criteria of having a main-stay support person—predefined as a local, similar (relative or other mother) person they saw frequently (every other day)—and who were above the median (1.1 contacts per day, hereafter referred to as daily contact) in frequency of contact with the network overall. High-Dyadic Relations criteria included a score of seven (presumably, on a nine-point scale, the lowest response that could still be considered "high") on the four components that required a single response, together with having four items scored as seven or above on the 12-item question. (Four represented division at the median. As it turned out, few of the mothers met all these criteria and because it was not uncommon to find one seemingly-inconsistent response for each individual mother, the high-Dyadic Relations category was comprised of those meeting five of the six criteria. For high Community, the criteria included qualitative components of having a regular weekly outing and belonging to one organization, together with quantitative division at the median for times out in months one, two and three (2, 3 and 3 times, respectively). Rituals, a single-score total, was divided at the median (9). Background variables, Sex and Breast vs. Bottle were determined qualitatively, while Age, Education and Income were based on qualitative groupings in the original questioning.
Dependent variables were the measures of mothering outcomes. The mothering outcomes were Perception of the Transition, Perceived Competency, and Infant-Mother Interaction. In addition, a fourth mothering outcome, called Depress-Isolate, was created as a result of preliminary analyses which indicated that two of the mothering outcome measures, Depress and Isolate, fit better together than where they originally had been grouped. The mothering outcomes were represented by 14 measures in all.

Preliminary Analyses

Preliminary correlational analyses were performed to determine internal consistency of network supports and mothering outcomes.

Network Supports

Three of the five network supports had been formed by grouping conceptually related components. These three were Access, Dyadic Relations and Community. After grouping, each of these three network supports was represented by a single score. (Grouping wasn't necessary for the other two network supports, Size and Rituals, which had originally been represented by a single score.) To determine if the components within each of these variables were related statistically, Pearson Product Moment coefficients of correlation were computed. Although the conceptual unity of these variables did not depend upon the items being correlated with one another, the internal consistency would be enhanced by showing statistical as well as conceptual relationships among the items.
Access. The Access variable combined the components of Frequency of contact, Proximity, Continuity and Similarity. Holistically, the variable represented whether the mother had daily contact with the network overall (Frequency A) and whether she had a single person who lived in town (Proximity), with whom she had had a relationship of two years or longer (Continuity), who was similar to her, that is, a relative or other mother (Similarity) and who she saw three or more times a week (Frequency B).

Correlations among the Access items are presented in Table 1. (For these and all subsequent correlation coefficients reported in this paper significance levels were determined for 40 (N - 2) degrees of freedom.) All correlations that were performable among the Access components were significant at the .05 level of probability or greater. The correlation between Frequency A (average daily contact) and Frequency B (whether she saw any one person three times a week) was .65 (p < .01). Correlation between Frequency A and Proximity (whether the mother had one local support person) was .26 (p < .05) and between Frequency B and Proximity was .37 (p < .01). As every mother entered the Continuity and Similarity categories, it was not possible to compute further correlations because there was no variance. That is, every mother had a support person she had known for two years and every mother had a relative or other mother as a support person. Altogether, it would appear from the correlations performed that there is some statistical, as well as conceptual, cohesiveness to the Access variable.
Table 1
Correlations Between Items Forming Access Variable

<table>
<thead>
<tr>
<th>Items</th>
<th>Frequency B</th>
<th>Proximity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency A</td>
<td>.65**</td>
<td>.26*</td>
</tr>
<tr>
<td>Frequency B</td>
<td>.37**</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05, df 40.
**p < .01, df 40.

Dyadic Relations. The Dyadic Relations variable was composed of the components Intensity, Directedness and Content of Dyadic Relations. Altogether Dyadic Relations referred to whether the mother believed the persons with whom she had relationships had been supportive and the components referred to whether the mother believed she had received adequate support (Intensity), whether most other people and the husband had been supportive (Directedness A and B, respectively) and whether she had received overall, physical and emotional support (Content A, B and C, respectively).

Correlations among the Dyadic Relations items are presented in Table 2. Correlations of every item with every other were all significant at the .05 level of probability or greater except one. Content C (emotional support) was not significantly correlated with Directedness B (husband support). The strong pattern of significant correlations between the items of the Dyadic Relations variable suggests that this variable too has some statistical as well as conceptual cohesiveness.
### Table 2
Correlations Between Items Forming Dyadic Relations Variable

<table>
<thead>
<tr>
<th>Items</th>
<th>Directedness A</th>
<th>Directedness B</th>
<th>Content A</th>
<th>Content B</th>
<th>Content C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensity</td>
<td>.59**</td>
<td>.44**</td>
<td>.67**</td>
<td>.35*</td>
<td>.26*</td>
</tr>
<tr>
<td>Directedness A</td>
<td>.28*</td>
<td>.60**</td>
<td>.46**</td>
<td>.42**</td>
<td></td>
</tr>
<tr>
<td>Directedness B</td>
<td></td>
<td>.38**</td>
<td>.32*</td>
<td>.19</td>
<td></td>
</tr>
<tr>
<td>Content A</td>
<td></td>
<td></td>
<td>.30*</td>
<td>.36**</td>
<td></td>
</tr>
<tr>
<td>Content B</td>
<td></td>
<td></td>
<td></td>
<td>.35*</td>
<td></td>
</tr>
<tr>
<td>Content C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* *p < .05, df 40.
** *p < .01, df 40.

**Community.** The third independent variable formed by grouping, Community, consisted of items pertaining to whether the mother took a regular weekly outing (Reg Outing); how often she left home the first month (Out Month 1), the second month (Out Month 2) and the third month (Out Month 3), and whether she was an active member in either a church or community organization (Organization).

Correlations among the Community items are presented in Table 3. Reg Outing was significantly correlated with Out Month 1 (p < .01), Out Month 2 (p < .01), Out Month 3 (p < .05), and with Organization (p < .05). Out Month 1 was highly and significantly correlated with Out Month 2 (p < .01), and Out Month 3 (p < .01),
but not with Organization (.08). Out Month 2 correlated with Out Month 3 (.76, $p < .01$, but not significantly with Organization (.21), while Organization did correlate significantly with Out Month 3 (.30, $p < .05$). The only nonsignificant relationships were between Out Month 1 and Organization and Out Month 2 and Organization. Except for these two nonsignificant relationships the Community variable does appear to have considerable cohesiveness.

Table 3

Correlations Between Items Forming Community Variable

<table>
<thead>
<tr>
<th>Items</th>
<th>Out Month 1</th>
<th>Out Month 2</th>
<th>Out Month 3</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reg Outing</td>
<td>.38**</td>
<td>.38**</td>
<td>.35*</td>
<td>.30*</td>
</tr>
<tr>
<td>Out Month 1</td>
<td></td>
<td>.61**</td>
<td>.76**</td>
<td>.08</td>
</tr>
<tr>
<td>Out Month 2</td>
<td></td>
<td></td>
<td>.76**</td>
<td>.21</td>
</tr>
<tr>
<td>Out Month 3</td>
<td></td>
<td></td>
<td></td>
<td>.30*</td>
</tr>
</tbody>
</table>

*p $< .05$, df 40.

**p $< .01$, df 40.

Mothering Outcomes

Three mothering outcomes had originally been selected. These were Perception of the Transition, Perceived Competency, and Infant-Mother Interaction. The first pertained to the mother's retrospective view of the transition period, the second to her sense of competency at the present moment while the third focused on actual interaction behaviors.
There were six measures of each of the first two mothering outcomes, and there were two measures of the third mothering outcome. To determine if measures of mothering outcomes belonged as they had been grouped, within each mothering outcome every measure was correlated with every other. The correlational pattern indicated two of the measures were more highly correlated with one another than with the measures with which they had been originally grouped. Thus, a fourth mothering outcome, called Depress-Isolate, was created. Table 4 shows the correlations within the mothering outcomes.

Mothering outcomes were not grouped in a manner precisely analogous to how network supports had been grouped. Unlike the network supports which had been grouped to form a single score, the mothering outcomes maintained multiple referents. While it would have been desirable to have had single scores for the mothering outcomes, it was necessary to keep the mothering outcomes in the multiple-referent form. This was because there was no procedure for creating combined scores that was both statistically legitimate and that would have resulted in a continuous variable for analysis. Had the sample been larger, factor analysis could have been performed. In lieu of factor analysis, the significant correlations between the measures of mothering outcomes still lend some support to the conceptual groupings.

**Perception of the Transition.** Five of the six measures of Perception of the Transition were completely intercorrelated at the .05 level of significance or greater. These five were Settled, Easy Adjust, Easy Baby, 1st Month, and Reward. Correlations ranged from .27 (p < .05)
### Table 4
Significant Correlations Between Mothering Outcomes

<table>
<thead>
<tr>
<th>Mothering Outcomes</th>
<th>Perception of the Transition</th>
<th>Depress-Isolate</th>
<th>Perceived Competency</th>
<th>Infant-Mother Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Settle Easy Baby</td>
<td>Easy 1st Reward</td>
<td>De-press Iso- late</td>
<td>Decisions Self-Relation Enjoy HOME MERV Synchrony</td>
</tr>
<tr>
<td></td>
<td>.43**</td>
<td>.48**</td>
<td>.44** .35*</td>
<td>.39** .38** .68** .48** .45** .28** ..</td>
</tr>
<tr>
<td></td>
<td>.56**</td>
<td>.69**</td>
<td>.39** - .40**</td>
<td>..</td>
</tr>
<tr>
<td></td>
<td>.73**</td>
<td>.51**</td>
<td>- .41** .31* .58**</td>
<td>..</td>
</tr>
<tr>
<td></td>
<td>.27*</td>
<td>..</td>
<td>-.29* .32* .34* .45**</td>
<td>..</td>
</tr>
<tr>
<td>Reward</td>
<td>-.29*</td>
<td>.54**</td>
<td>..</td>
<td>.39** .54** .35* .29*</td>
</tr>
<tr>
<td>Depression-Isolate</td>
<td>-.69**</td>
<td>..</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Isolate</td>
<td></td>
<td></td>
<td></td>
<td>..</td>
</tr>
<tr>
<td>Perceived Competency</td>
<td></td>
<td></td>
<td></td>
<td>..</td>
</tr>
<tr>
<td>Cues</td>
<td>.28*</td>
<td>..</td>
<td>.27* .31*</td>
<td>..</td>
</tr>
<tr>
<td>Decisions</td>
<td></td>
<td></td>
<td></td>
<td>..</td>
</tr>
<tr>
<td>Self as Mother</td>
<td></td>
<td></td>
<td></td>
<td>..</td>
</tr>
<tr>
<td>Relation</td>
<td></td>
<td></td>
<td></td>
<td>..</td>
</tr>
<tr>
<td>Enjoy</td>
<td></td>
<td></td>
<td></td>
<td>..</td>
</tr>
<tr>
<td>Interaction</td>
<td></td>
<td></td>
<td></td>
<td>..</td>
</tr>
<tr>
<td>HOME MERV Synchrony</td>
<td></td>
<td></td>
<td></td>
<td>..</td>
</tr>
</tbody>
</table>

*p < .05, df 40.

**p < .01, df 40.
between Reward and 1st Month to .73 (p < .01) between Easy Adjust and 1st Month. The sixth measure of Perception of the Transition, Depress, was significantly associated with only three of the other five. Therefore, for purposes of further analysis, Depress was not included as part of Perception of the Transition.

**Perceived Competency.** Of the measures of Perceived Competency, four were highly intercorrelated at the .05 level of significance or greater. Cues, Self as Mother, Relation, and Enjoy were all significantly related to one another with correlations ranging from .26 (p < .05) between Enjoy and Cues to .69 (p < .01) between Self as Mother and Relation. A fifth measure, Decisions, wasn't so tightly woven into this mothering outcome as the others. Decisions was significantly correlated with all the other measures except Relation. The significant correlations for Decisions with other measures in the group ranged from .28 (p < .05) between Decisions and Cues to .50 (p < .01) between Decisions and Self as Mother. Decisions wasn't so far removed from other measures of Perceived Competency to be dropped, however, Isolate, because it missed significance in connection with two other measures in the group, was dropped from Perceived Competency for purposes of further analyses.

**Infant-Mother Interaction.** The third mothering outcome, Infant-Mother Interaction, was measured in two ways, HOME MERV and Synchrony. HOME MERV scores were from observation of the mother's emotional responsiveness to the infant and Synchrony scores were derived from videotaped analysis of Infant-Mother Interaction during feeding. HOME MERV
scores and Synchrony scores were correlated with a coefficient of .28 ($p < .05$).

**Depress-Isolate.** A fourth mothering outcome was created to accommodate the measures of mothering outcomes dropped from Perception of the Transition and Perceived Competency and because Depress and Isolate seemed to have more to do with each other ($r = -.69, p < .01$) than either had to do with any other mothering outcome measures. (The reason for the negative correlation was that high depression yielded a high score while high isolation yielded a low score.)

**Summary**

The preceding section has demonstrated significant correlations within the network supports and within the mothering outcomes thereby lending some statistical support to their formation on conceptual grounds.

**Correlational Analyses**

To test the null hypothesis that the five network supports and the five background variables were not significantly related to one another and to test the null hypothesis that four mothering outcomes were not significantly related to one another, PPM coefficients of correlation were computed. A ten x ten independent variable matrix (comprised of network supports and background variables) was formed and a 14 x 14 dependent variable matrix was formed (comprised of measures of mothering outcomes), and all possible correlations were computed.
Mothering Outcomes

Mothering outcomes were, again, Perception of the Transition, Perceived Competency, Infant-Mother Interaction and Depress-Isolate. As these four mothering outcomes were represented by 14 measures of mothering in all, a 14 x 14 correlation matrix was formed. This matrix is presented in Table 4 (referred to on page 61). This table was already introduced to illustrate correlations within mothering outcomes; it will now be used to show the correlations across the mothering outcomes.

Perception of the Transition was related to Perceived Competency. Of the 25 associations between Perception of the Transition and Perceived Competency, 18 were significant. One measure of Perception of the Transition, Settled, was significantly correlated with every Perceived Competency item. Significant correlations ranged from .38 ($p < .01$) between Settled and Decision to .68 ($p < .01$) between Settled and Self as Mother. Reward, Easy Adjust and 1st Month were each related to all but one of the Perceived Competency items with correlations ranging from .32 ($p < .05$) between Cues and 1st Month to .63 ($p < .01$) between Cues and Reward. Easy Baby was significantly related to Enjoy (.44, $p < .01$) but not to any other measure of Perceived Competency.

The two measures of Infant-Mother Interaction (HOME MERV and Synchrony) were in some cases related to the other mothering outcomes. The measures of Infant-Mother Interaction were significantly correlated in six out of the ten associations with Perception of the Transition and in two of ten associations with Perceived Competency. HOME MERV scores were significantly correlated with Easy Baby; Easy Adjust; Settled; Reward;
Self as Mother; and Relation. Correlations ranged from .26 (p < .05) to .39 (p < .01). The micro-interaction analysis, Synchrony, appeared to have more to do with mother's perceptions of the baby (Easy Baby to Synchrony r = .28, p < .05) and with how things went during the first month (First Month to Synchrony r = .35, p < .05) than with the other perceptions.

Next, while Depress and Isolate showed the strongest relationship with one another as discussed above, both were related to other mothering outcomes. Depress-Isolate measures related significantly with Perception of the Transition measures in five out of ten cases, with measures of Perceived Competency in three out of ten cases but not at all with measures of Infant-Mother Interaction. Both Depress and Isolate were significantly associated with Easy Adjust (-.41, p < .01 for Depress, and .31, p < .05 for Isolate). Depress was significantly associated with Easy Baby (-.40, p < .01), and 1st Month (-.29, p < .05) while Isolate associated with Reward (.54, p < .01), Self as Mother (.27, p < .05), Relation (.31, p < .05) and Cues (.28, p < .05).

Of the 69 possible relationships across mothering outcomes, 34 were significant. On this basis, the null hypotheses that mothering outcomes are not related to one another is rejected.

Independent Variables

The independent variable matrix was comprised of the five network supports (Size, Access, Dyadic Relations, Community and Rituals) but also included the five background variables (Sex, Breast vs. Bottle Feeding, Age, Education and Income of mother) because background variables were to
be treated as independent variables in subsequent analyses. This was done to find out if the network supports were correlated with one another and to know if they were confounded with the background variables. Significant correlations between independent variables are presented in Table 5.

Many of the network supports were significantly correlated with one another. Of the ten possible relationships between network supports, six were significant and three just missed significance at the .05 level of probability. The highest correlation was .57 (p < .01) between Access and Dyadic Relations, and other significant relationships were between Access and Size (.33, p < .05); Size and Dyadic Relations (.38, p < .01); Size and Rituals (.34, p < .05); Access and Community (.38, p < .01) and Community and Rituals (.30, p < .05). On the basis of these correlations, the null hypothesis stating there were no significant relationships between network supports is rejected.

Network supports for the most part were not related to background variables. However, there were exceptions. Mothers of girls were significantly less likely to have Access support (-.29, p < .05), and highly educated mothers were significantly less likely to get Dyadic Relations support (-.31, p < .95). There were a few other sporadic significant correlations in the matrix. Mothers of girls were significantly more likely to be older (.29, p < .05) and to be better educated (.56, p < .01) than mothers of boys. Predictably, relationships were found also between Age and Education (.39, p < .01), Age and Income (.49, p < .01) and between Education and Income (.35, p < .01).
Table 5

Significant Correlations Between Social Network Supports and Background Variables

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<td>.38**</td>
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*p < .05, df 40.

**p < .01, df 40.
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Summary

The preceding section focused on the relationships between mothering outcomes and on the relationships between network supports. Because there were numerous significant relationships between measures of mothering outcomes, the null hypothesis stating there were no significant relationships between mothering outcomes was rejected. Mothers who had found the transition easy were also more likely to report they were doing a good job. Of 25 correlations between measures of Perceptions of the Transition and measures of Perceived Competency, 18 were significant. The mothers who had found the transition easy were also somewhat more likely to have good interaction with their infant (six of ten correlations significant) and were somewhat less likely to feel depressed and isolated (five of ten correlations significant). On the other hand, in this sample mothers who felt good about their own competency weren't necessarily more competent in interaction (only two out of ten correlations significant), nor did they perceive themselves as necessarily less depressed or isolated (three out of ten correlations significant). There was no relationship in this sample between the interaction and a sense of having been depressed or isolated.

The null hypothesis stating there were significant relationships between network supports was also rejected. Many network supports were significantly correlated with one another. Of the ten network support correlations computed, six were significant and three just missed significance. Therefore, a mother who had one kind of support was somewhat likely to have the others as well. These supports were, for the most part, independent of confounding by background variables. The exceptions were
significant relationships between Sex and Access and between Education and Dyadic Relations.

Analyses of Variance

Seventy separate one-way completely randomized analyses of variance were performed to test the hypotheses that there were no significant differences in mothering outcomes between mothers who had, and those who did not have, five kinds of network supports. Seventy analyses of variance were also performed to determine if five background variables were related significantly to the mothering outcomes. The five network supports and five background variables were independent variables, and 14 measures of mothering outcomes were dependent variables in analyses. When single-factor analyses of variance indicated there were significant effects for both a network support and a background variable for the same measure of mothering outcome, completely randomized factorial analyses of variance were performed with both the network support and background factor as independent variables. Regarding the factorial analyses of variance, in cases where cell sizes were unequal, unweighted means analyses were performed. F values from all analyses of variance are in Tables 6 and 9, and corresponding means are in Tables 7, 8 and 10. It will be necessary for the reader to be referred back and forth between tables for the subsequent presentation of results.
## Table 6
Significant F Values for Network Supports, Background Variables and Mothering Outcomes

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<th>Mothering Outcomes</th>
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<td>Depress</td>
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<td>Synchrony&lt;sup&gt;d&lt;/sup&gt;</td>
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<sup>a</sup><sub>F (1, 40)</sub>
<sup>b</sup><sub>F (2, 39)</sub>
<sup>c</sup><sub>F (2, 37)</sub>
<sup>d</sup><sub>F (1, 38)</sub>

*<sup>p</sup> < .05
**<sup>p</sup> < .01
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Means and Ns for Network Supports and Mothering Outcomes

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*p < .05.

**p < .01.
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Table 8
Means and Ns for Background Variables and Mothering Outcomes

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*p < .05.

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Table 9

Significant F Values
for Network Supports X Background Variables and Mothering Outcomes

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*aF (1, 36).
*bF (2, 36).
*cF (1, 38).
*dF (1, 34).
*eF (2, 34).

*p < .05
**p < .01
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<tr>
<td></td>
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<tr>
<td></td>
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<td>6.42**</td>
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<tr>
<td>5.19*a</td>
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<td>5.07*</td>
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<td>17.05**</td>
<td>7.73**</td>
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Table 10
Cells Means and Ns for Significant Interactions

Dyadic Relations X Education with Easy Adjust as Dependent Variable

<table>
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<tr>
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<tr>
<td>Low</td>
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<td>8.5</td>
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</table>

Rituals X Education with Easy Adjust as Dependent Variable

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<thead>
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<tr>
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<td>7.25</td>
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<tr>
<td></td>
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<td>n=7</td>
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Rituals X Sex with Easy Adjust as Dependent Variable

<table>
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<th>Girl</th>
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<tbody>
<tr>
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<td>6.71</td>
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<tr>
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<td>n=9</td>
<td>n=8</td>
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</tbody>
</table>
Perception of the Transition

Significant F values for single-factor analyses of variance are in Table 6, and the corresponding means may be found in Table 7. The first mothering outcome is Perception of the Transition. To determine if the five measures of Perception of the Transition varied as a function of the five network supports, 25 analyses of variance were performed. Of these, 18 yielded significant effects for network supports.

Of the five network supports, Access yielded the largest number of significant effects. Those mothers who had access to a similar, frequent, proximal support person reported significantly easier times for all measures of Perception of the Transition. F (1, 40) values for Access and the Perception of the Transition measures ranged from 4.27 (p < .05) for Reward to 9.02 (p < .01) for Easy Adjust.

Community, Dyadic Relations and Size also accounted for significant effects. Mothers who were in contact with their communities had significantly higher Easy Adjust (F (1, 40) = 8.29, p < .01); Settled (F (1, 40) = 8.47, p < .01); Reward (F (1, 40) = 8.30, p < .01); and Easy Baby (F (1, 40) = 4.48, p < .05) scores. Mothers who received greater amounts of network support from one-to-one relationships reported easier 1st Month (F (1, 40) = 9.67, p < .01); greater Reward (F (1, 40) = 7.09, p < .05); higher Easy Adjust (F (1, 40) = 6.99, p < .05); and higher Easy Baby (F (1, 40) = 5.49, p < .05) scores. Mothers with large social networks had significantly higher Easy Adjust (F (1, 40) = 10.43, p < .01); 1st Month (F (1, 40) = 8.71, p < .01); Easy Baby (F (1, 40) = 8.23, p < .01); and Reward (F (1, 40) = 5.39, p < .05) scores. Rituals emerged as an
unimportant network support relative to the other network supports. Number of Rituals was significant only for Easy Adjust ($F(1, 40) = 5.67, p < .05$).

Based on the analyses of variance, the null hypothesis that there were no significant differences in Perception of the Transition between mothers having, and those not having network supports, is rejected.

The importance of the five background variables—Sex, Breast vs. Bottle feedings, Age of mother, Education, and Income—to the five Perception of the Transition measures was determined in separate analyses of variance. (Significant $F$ values are also presented in Table 6, and corresponding means are presented in Table 8.) Of 25 such analyses performed, the $F$ for background factors was significant in only four cases. Education was significant for Settled ($F(2, 39) = 4.17, p < .05$), while Sex, Education and Income were all significant for Easy Adjust. Sex $F(1, 40)$ was 8.39 ($p < .01$); Education $F(2, 39)$ was 3.99 ($p < .05$) and Income $F(2, 37)$ was 3.41 ($p < .05$).

When both a background variable and a network support were significant for the same measure of a mothering outcome, every possible combination of background variable by network support two-factor analysis of variance was computed to determine relative contributions to variance. (Significant $F$ values for the two-factor ANOVAs are presented in Table 9.)

For outcome Settled in the two-way Education x Access analysis, neither factor was significant, however, the Education x Community analysis showed significant effects for both factors. Mothers who participated in their communities ($F(1, 36) = 7.33, p < .01$) and mothers
with a high school education ($F(2, 36) = 4.18, p < .05$) were more settled than their nonparticipating and less-educated counterparts.

For measure Easy Adjust, it was necessary to perform five three x two Education x network supports (Size, Access, Dyadic Relations, Community and Rituals) analyses. From these analyses it was shown that mothers reporting the easiest adjustment were those who had a high school education. $F(2, 36)$ values for Education from the five ANOVAs were 8.87, $p < .01$; 3.39, $p < .05$; 3.76, $p < .05$; 5.07, $p < .05$; and 5.57, $p < .05$. Additionally, mothers reporting easiest adjustment had large networks ($F(1, 36) = 18.67, p < .01$); had accessible support ($F(1, 36) = 5.43, p < .05$); participated in their communities ($F(1, 36) = 7.59, p < .01$), and participated in rituals ($F(1, 36) = 5.19, p < .05$).

Having supportive Dyadic Relations, however, did not emerge significant in the two-way ANOVA with Education. It will be recalled that Education and Dyadic Relations were significantly correlated with one another ($r = -.31, p < .05$). Additionally, the Education X Dyadic Relations interaction ($F(2, 36) = 6.42, p < .01$) was significant. (Cell means for significant interactions may be seen in Table 10.) The means showed that college educated (high Dyadic Relations $\bar{m} = 7.25$; low Dyadic Relations $\bar{m} = 4.66$) and junior college educated (high Dyadic Relations $\bar{m} = 7.50$; low Dyadic Relations $\bar{m} = 6.45$) mothers with supportive relationships reported easiest adjustment, but the finding was the reverse for high school educated mothers (high Dyadic Relations $\bar{m} = 6.75$; low Dyadic Relations $\bar{m} = 8.50$).

The significant Rituals X Education interaction, similarly, revealed college (high Rituals $\bar{m} = 6.70$; low Rituals $\bar{m} = 4.00$) and junior college
educated (high Rituals $m = 7.08$; low Rituals $m = 6.42$) mothers had higher Easy Adjust scores if they also participated in Rituals but that wasn't true for high school educated mothers (high Rituals $m = 7.00$; low Rituals $m = 7.25$).

Sex of baby was significant in one-way ANOVAs for Easy Adjust (please refer to Table 6). The same was true for every network support. When every possible Sex x network support ANOVA was computed, Sex and every network support were significant in each case (Table 9). These findings revealed boy babies and all network supports had a positive effect on the ease of adjustment. The $F$ (1, 38) values for Sex and Size were 10.33 and 12.78, respectively (for both $p < .01$). For Sex and Access, $F$ values were 4.83 and 5.67 (for both $p < .05$); for Sex and Dyadic Relations $F$ values were 8.56 and 7.31 ($p$ for both $< .01$) and for Sex and Community $F$ values were 7.37 and 7.37 ($p < .01$). $F$'s for Sex and Rituals were 17.05 and 10.95 ($p < .01$). Only the Sex x Rituals interaction ($F$ (1, 38) = 7.73, $p < .01$) was significant and examination of means (Table 10) indicated that mothers of girls (High Rituals $m = 6.71$, Low Rituals $m = 4.25$) suffered a dip in ease of adjustment if they did not participate in rituals but that relationship did not hold for mothers of boys (High Rituals $m = 7.27$, Low Rituals $m = 7.11$).

Effects for Income were not significant in the two-way analyses of variance (Table 9) for Easy Adjust as the dependent variable, but network supports were significant. In two-way analyses of variance with Income, $F$ (2, 34) values for network supports were as follows: Size, 5.61; Access, 5.17; Dyadic Relations, 5.77; Community, 5.23; and Rituals, 5.64.
All were significant at the .05 level of probability. None of the interactions were significant.

**Perceived Competency**

The next group of data to be reported pertain to the five measures of Perceived Competency. $F$ values for these data are in Table 6, and means are in Table 7. While there were significant differences between the mothers who had, and didn't have, network supports relative to this mothering outcome, these data do not show the strong pattern of effect for network supports as was seen for Perceptions of the Transition. Only seven of the 25 analyses of variance performed yielded significant results.

Community, of the five network supports, appeared to be most important for Perceived Competency. $F$ values for Community with each of the Perceived Competency mothering outcomes were as follows: Enjoy ($F(1, 40) = 12.08, p < .01$); Self as Mother ($F(1, 40) = 6.35, p < .05$); and Relation ($F(1, 40) = 5.12, p < .05$). The other network supports were equal and next in a hierarchy of significant effects with each significant for only one outcome. Mothers with high Access were more likely only to have high Self as Mother scores ($F(1, 40) = 5.12, p < .05$) and there were significant differences for Dyadic Relations only for Cues with an $F(1, 40)$ of 4.17 ($p < .05$). Differences for Size and Rituals also were significant only for Cues with $F(1, 40)$ values of 4.41 and 5.77, respectively, ($p$ for both < .05). Clearly the mother's Perceived Competency wasn't as ammenable to network support influence as was her Perception of the Transition. However, because there were some
significant differences, the null hypothesis stating there were no significant differences in Perceived Competency between mothers having and those not having network supports is rejected.

Several background variables also showed significant effects for Perceived Competency measures, however, of 25 ANOVAs performed only five yielded significant effects for background variables. (These F values are in Table 6 and means are in Table 8.) Income was significant for Cues \( (F(2, 37) = 4.28, p < .05) \). As already reported, so were network supports Size, Dyadic Relations and Rituals. Education was significant \( (F(2, 39) = 3.49, p < .05) \) for Self as Mother. Access and Community had also been significant for that variable. Finally, Education \( (F(2, 39) = 6.39, p < .01) \), Age \( (F(1, 40) = 4.70, p < .05) \) and Sex \( (F(1, 40) = 5.86, p < .05) \) were all significant for Decisions, but no network supports showed significant effects for this measure.

When background variables and network supports were assessed in two-factor analyses of variance, (in Table 9) again, Income did not emerge as a significant background factor. For Cues, two-factor ANOVAs were nonsignificant for Income in every case but were significant for Size \( (F(1, 38) = 5.62, p < .05) \); Dyadic Relations \( (F(1, 38) = 5.78, p < .05) \); and Rituals \( (F(1, 38) = 5.64, p < .05) \).

For Self as Mother, the first of two-factor ANOVAs for Education and network supports was not significant for the network support Access or Education, but the second showed mothers who had Community \( (F(1, 38) = 4.74, p < .05) \) involvement and low Education \( (F(2, 36) = 3.46, p < .05) \) had significantly better views of themselves as mothers. The third out-
come in this group. Decisions, for which three background factors had been significant in individual analyses of variance as reported above, had not been significant for any network supports, so no further analyses were performed.

**Infant-Mother Interaction**

*F* values for these analyses are in Table 6 and means are in Table 7. Infant-Mother Interaction refers to the mother's actual behavior with the baby. Here five of ten of the analyses of variance yielded significant *F* values, but among the ones that were significant, a clear pattern emerged regarding the nature of network supports and the two Infant-Mother Interaction measures, HOME MERV and Synchrony. Only network supports, Access, Dyadic Relations and Community appeared to make a difference in how the mother actually interacted with her baby. Mothers with Access had both higher HOME MERV scores (*F* (1, 40) = 7.35, *p* < .01) and higher Synchrony scores (*F* (1, 38) = 6.38, *p* < .05). Similarly, mothers with supportive Dyadic Relations had higher HOME MERV scores (*F* (1, 40) = 6.13, *p* < .05) and higher Synchrony scores (*F* (1, 38) = 8.41, *p* < .01). Community made a significant difference for HOME MERV with an *F* (1, 40) of 7.76 (*p* < .01) but not to Synchrony. The null hypothesis that there were no significant effects for network supports on Infant-Mother Interaction is rejected.

**Depress-Isolate**

*F* values for Depress-Isolate analyses are also in Table 6, and means are in Table 7. There were significant differences for Depress-Isolate
between mothers who had and those who lacked Access and Community support. Mothers with high Access reported lower Depress scores ($F(1, 40) = 7.39, p < .01$) and less sense of being isolated ($F(1, 40) = 8.54, p < .01$). Mothers who were high Community also had lower Depress scores ($F(1, 40) = 7.12, p < .05$) and fewer feelings of being an Isolate ($F(1, 40) = 17.81, p < .01$). Dyadic Relations also accounted for significant Isolate variance ($F(1, 40) = 4.20, p < .05$). An implicit hypothesis that there were no significant effects for network supports relative to the post hoc dependent variable Depress-Isolate was rejected.

Summary of Analyses of Variance Results

Of the 25 Perception of the Transition analyses performed, 18 revealed significant differences between mothers having and mothers lacking network supports. However, mothers with network supports had significantly higher measures of Perceived Competency in only seven of 25 cases. There were significant differences between mothers who had and those who did not have network supports for each Mother-Infant Interaction and Depress-Isolate in five out of ten cases. Additionally, network supports affected mothering outcomes differentially. Size, Access, Dyadic Relations and Community, but not Rituals, were important relative to Perceptions of the Transition, while Community emerged the important variable with Perceived Competency. Access and Dyadic Relations were related significantly to Infant-Mother Interaction and Access and Community were most important relative to Depress-Isolate.

Background variables were only significant for mothering outcomes in nine of 70 cases. When a background variable and a network support were
significant for the same outcome measure, two-factor analyses of variance were computed. These analyses indicated that Sex and Education were significant in connection with Easy Adjust but that effects for Income washed out when network supports were controlled. In every two-factor analysis of variance network supports remained significant.

Results Summary

The important relationships that emerged from all the analyses are summarized as follows.

- For network supports, Access, Dyadic Relations and Community, components were significantly intercorrelated.

- For mothering outcomes, Perception of the Transition, Perceived Competency, Infant-Mother Interaction, and Depress-Isolate, the measures comprising the mothering outcome were significantly intercorrelated.

- Network supports—Size, Access, Dyadic Relations, Community and Rituals—were related to one another. Six of ten of the pairwise correlations in this group were significant at the .05 level and three just missed significance at this level.

- Mothering outcomes were related to one another, but not every outcome was related equally to every other. Mother's Perception of the Transition was related to Perceived Competency (with 18 out of 25 correlations significant), somewhat to Infant-Mother Interaction (six out of ten correlations significant), and somewhat to Depress-Isolate (five out of ten correlations significant). There were not strong relationships between Perceived Competency and Infant-Mother Interaction (only three of
ten correlations significant) or between Perceived Competency and Depress-Isolate (two of ten correlations significant). Infant-Mother Interaction and Depress-Isolate were not significantly related to one another at all.

- Network supports appeared to contribute to a positive Perception of the Transition. Of 25 analyses of variance in this group, 18 were significant with every one of the five measures varying as a function of a network support. Two of the measures were also significantly related to background variables, Education, Income and Sex, but when network supports were controlled in two-factor analyses of variance, only the effects for Sex and Education on Easy Adjust and for Education on Settled held up. Network supports with only one exception remained significant in the two-factor analyses. Four of the five network supports, Size, Access, Dyadic Relations and Community, appeared to be more important in relation to Perception of the Transition than did Rituals with Rituals accounting for only one of the significant relationships.

- Network supports appeared to be far less important when it came to mother's Perceived Competency. Of 25 analyses of variance computed in this group, only seven were significant. Of these seven, three varied as a function of Community, while only one each was significant for Size, Access, Dyadic Relations and Rituals. Four of the outcome measures were significantly related to one network support each, while one, Decisions, was not affected by network support at all. Of the four influenced measures, two were also influenced significantly by background variables,
Education and Income, but only the effect of Education on Self as Mother held up in the two-factor analyses of variance.

- There were significant relationships between both of the Infant-Mother Interaction measures and Access and Dyadic Relations. HOME MERV, but not Synchrony, was also significantly associated with Community. These relationships were not confounded with background factors.

- A fourth mothering outcome, created in the analysis, called Depress-Isolate, was significantly related to Access and Community, and Isolate was also related to Dyadic Relations. Neither Depress nor Isolate was significantly affected by background variables.
DISCUSSION

Null hypotheses were that there would be no relationships between mothering outcomes; that there would be no relationships between network supports and that there would be no differences between mothers who had, and those who didn't have, network supports. All the null hypotheses were rejected.

Mothering Outcomes

It was concluded that some, but not all, of the mothering outcomes were related to one another. That is, it was concluded that for some mothering outcome pairs there was a pattern linking many of the measures of one to a large number of measures of the other. (Because of the multi-faceted nature of mothering outcomes, only if a large number of the relationships between individual measures of the outcomes were significant was it concluded there was an important relationship between two mothering outcomes. If only several--i.e., fewer than half--correlations between two mothering outcomes were significant, the results were discounted as a function of alpha error.) There were also a number of additional two-way and three-way relationships in the matrix that seem to point the way towards future research. Prior to discussing these relationships the mothering outcomes will be briefly reviewed.

Perception of the Transition outcome measures focused on the question: How did the mother perceive the adjustment to motherhood? Of interest was whether the mother thought the transition had been difficult (assessed by measure Easy Adjust), whether some aspects of it had been
especially difficult (assessed by measures Easy Baby and First Month),
whether it seemed rewarding regardless of how difficult (Reward) and
whether she now felt the adjustment time was over (Settled). The unique
focus was thus on the adjustment aspect of new motherhood, the difficulty
of the change for the mother as a person.

Perceived Competency measures focused on the question: How well did
the mother feel she was performing her job as mother? Perceived
Competency could be seen as a group of measures of mothering confidence.
This was quite a different focus from how difficult the adjustment had
been, and it included her perception of how well she was doing overall
(Good Self), and, specifically, how well she thought she was reading the
baby's cues (Cues), how good she felt about the decisions she was making
(Decision), how good she felt about the relationship with the baby
(Relation) and how much she enjoyed the time with the baby (Enjoy). The
unique focus was thus on the mother's confidence in the mother role.

Infant-Mother Interaction assessed behaviors, not attitudes, as the
other outcomes did. Focus was on how the mother interacted with her baby
in a general way (HOME MERV) and in a very subtle, second-by-second way
(Synchrony).

Depress-Isolate was measured by the mother's perception of how much
depression she had experienced (Depress) and by her perception of how
isolated as a mother she felt (Isolate). The Depress-Isolate outcome was
created because the two measures of Depress and Isolate were highly cor-
related with one another and not so highly with the measures with which
they had been grouped originally.
Relationships Between Outcomes

Relationships between the measures forming the four mothering outcomes were examined and it was concluded that Perception of the Transition measures were related to Perceived Competency measures but that, while there were some indications of relationships between other outcomes, they were not conclusive.

As indicated by 18 significant correlations among 25, mothers who thought they had a difficult transition (Perception of the Transition) also perceived themselves as less competent (Perceived Competency). This finding seems to say either that having a smooth transition has effects on the mother's confidence extending at least into the fourth month or that the mother has a general outlook that seems to color what she says about both the transition and about herself as a mother. It is not concluded that these two variables should have been collapsed because their separateness was needed to answer the two distinct questions they addressed.

Because of the importance of infant-mother interaction (Schaffer, 1977), it was of particular interest to determine what other mothering outcomes were associated with positive interactions. None of the other mothering outcomes was conclusively associated with Infant-Mother Interaction, however, it was concluded that Perception of the Transition was more important to interaction than Perceived Competency because six of ten correlations in the former group had been significant compared to two of ten that were significant in the latter group. That Perceived Competency was not more related to interaction is a surprising finding.
in light of the fact that successful interaction is often equated with actual competency in mothering (Schaffer, 1977). The result seems to say that a mother's confidence may not always be warranted. In fact, it did appear that some of the mothers who were unsure of their Decisions and the baby's Cues (measures of Perceived Competency) were actually attending particularly closely and interacting particularly carefully with their babies. That is, on the other end of the continuum, some mothers appeared to have been ignorant to the possibilities pertaining to baby's Cues and their own Decisions therefore may have been rather blithe about their performance. This interpretation fits with the finding that Education and Age showed significant negative effects for confidence in Decisions, even though Education and Age weren't significantly associated with many of the other Perceived Competency measures. Dickie and Carnahan (Note 7) also found a discrepancy between observed competence and self-report of competence among new mothers.

Also important in these data was the total absence of significant relationships between Depress-Isolate and the Infant-Mother Interaction. This pattern was surprising given the oft-slated assumption in the literature that depressed mothers don't interact well with their infants (Brazelton, 1980; Schaffer, 1977). While the assumption seems to make sense, the data from this study do not support it, and therefore this study suggests the assumption needs further empirical testing. One explanation for the lack of connection between the mother's reports of depression and interaction may be that the mothers became depressed precisely because they were trying hard to respond to the baby, and even
though they may have become discouraged and run-down, they kept up their efforts with the baby. A second possibility is that some of these mothers may have even been overcompensating in responsiveness to the baby because they were aware they were not feeling good inside and didn't want that to impact the baby. Thus, the nature of the measure, self-report as opposed to objective, may even be an explanation for why depression and interaction were not associated here in that the awareness of depression could have been a resource for the relationship. An objective assessment of depression may have turned up mothers who weren't aware of being depressed or of the need to make an effort to compensate. In light of a nonsignificant relationship here, the assumption of a direct linkage between depression and interaction certainly suggests further study.

Relationships Between Variables in the Matrix

It seems the most conservative to draw conclusions on the basis of relationships between groups of variables--the mothering outcomes--rather than on the basis of any single significant correlate. However, because of the general confusion in the postpartum literature as to what indices best constitute well-being, and as to what "true factors" underlie well-being, a number of the significant relationships in the matrix between two and three, and in one case, several, variables will be discussed for their potential usefulness in clarifying the nature of outcomes in general. The search for the best general outcomes befuddles many a postpartum researcher, and doubtless there will be many more studies before it becomes clear what to look for in the complex web of possible indices. The significant correlations found in these data do present some inter-
testing hypotheses. It will be noted that some of the two-way relationships to be discussed are within outcome groupings and some are across groupings. While it would seem this apparent messiness should be avoided, it would not be in the best interests of science to presume that the groups formed for this one study are givens or that all relationships within groups as formed for this study were perfectly parallel in their import. Thus, relationships within two mothering outcomes—between Depress and Isolate, and between HOME MERV and Synchrony—deserve special comment in connection with several other associations in the matrix which are also noted.

First, relationships found between Depress and Isolate may make a contribution to the study of postpartum depression. The finding of a significant relationship between them seems to imply that depression from the mother's point of view has to do with the lack of social contact that often accompanies new motherhood, not with adjustment factors per se or even with baby care factors per se. It will be recalled that whether postpartum depression refers to single or multiple factors is at issue (Oakley, 1980) and, if depression is multi-faceted, then one must identify what type of depression it is that is being measured. While the study does not answer questions as to how many forms of depression there are, from the interviews it was possible to make some judgments as to what was being measured. The depression the mothers appeared to be referring to in this study was not perinatal weepiness (blues, as defined by Oakley, 1980) but rather seemed more to be intermittent down feelings and giving way to tears (depressed mood). Thus, it may be that isolation
is related to this form of depression. The relationships will need further research, especially research using objective assessments of depression as well as self-reports.

Second, pertaining to the relationships between the two interaction measures, the .28 correlation between HOME MERV and Synchrony was statistically significant but not as large as might have been expected. The lack of a higher correlation between the two lends support for the contention of Osofsky and Conners (1979) that it may be necessary to assess both the molar and micro levels of infant-mother interaction to achieve a comprehensive view of the interaction.

Third, the three-way significant association between Synchrony, 1st Month and Easy Baby warrants further investigation. Mother's perception of the easiness of her baby has been linked to later mother-child relationship qualities (Broussard & Hartner, 1970) as has Synchrony (Bell et al., 1972). However, the two have not been linked empirically to each other. Further, the data support the contention that the interactive contract is formed very early (Brazelton, 1961) and that the mother's concepts of the child are formed very early (Broussard & Hartner, 1970). The data in the present study offer the proposition that the first month is a sensitive period for both Synchrony beginning and for formation of mother's perceptions of the baby. It could be argued that the baby's temperament is the causative agent for both the perceptions and Synchrony. Indeed, the contribution of the baby's temperamental style to his interactive environment is increasingly being acknowledged (Lewis & Rosenblum, 1974). However, the argument that
temperament "causes" either the mother's perception of the baby or
Synchrony is insufficient to explain all the variance of these two out­
comes. Perceptions of the baby have been shown to vary with supple­
mentary education (Broussard, 1976) and in this study Easy Baby, 1st
Month and Synchrony all varied as a function of network supports as will
be discussed in the coming sections. Therefore, more than temperament
appears to influence both the mother's perceptions of the baby and
Synchrony.

Finally, it would be impossible to conclude from these data that
there is one central factor that represents well-being in early mother­
hood because some variables appeared to stand in relief against a complex
web of significant associations. However, it is also worthwhile to note
that no measure of mothering outcomes stood entirely alone. Further,
there was a complex of variables that may be shown in further studies to
form a general outlook-on-motherhood factor. Such a general factor was
suggested by the seven-way relationship between Settled, Easy Adjust,
Reward, Self as Mother, Relationship, Enjoy and HOME MERV. Every one of
these variables was significantly correlated with every other. What
they seem to have in common is that they may all measure a general
responsiveness to motherhood as positive or negative.

Altogether, the study hints at, but does not provide, conclusive
answers to what well-being in postpartum means. There is a need to
explore many measures with a sufficiently large sample to build
statistically-based factors. Some of the specific hypotheses suggested
by the data (e.g., the three-way relationship between Synchrony, Easy
Baby and 1st Month) may be tested also. Until it is clear what the best postpartum outcomes are, however, it is necessary to work with what we have. From the outcomes as formed in this study, it is summarized that Perceptions of the Transition and Perceived Competency were related to one another but that there were not enough significant relationships between the measures of each of those two mothering outcomes and Infant-Mother Interaction to be conclusive. It was possible to conclude that there were no relationships between Infant-Mother Interaction and Depress-Isolate in the study.

Network Supports

The null hypothesis that there were no significant differences between network supports also was rejected. Many of the network supports were found to be significantly correlated with one another. Before discussing those relationships, the nature of the network supports will be briefly reviewed.

Network Access measured whether the mother had daily network contact and whether she had a local relative or long-standing mother-friend who she saw at least three times a week. Of the 21 mothers identified as high Access, ten named their own mothers as the mainstay support person (that person who she saw three times a week); six named a sister or sister-in-law; one, a brother; one, a mother-in-law, and three named neighbors. It's not too difficult to see why the mother's mother was the most frequently mentioned if one considers the quantity of commitment involved in contacting a primipara three times a week. However, the daily contacts were an important part of Access support also.
Dyadic Relations was probably the most complex of the network support assessments and perhaps offers the most towards understanding the meaning of support. Dyadic Relations measured how much, how adequate, what kinds and from whom mothers received support. This variable also assessed whether mothers wanted support. And they did, as indicated by the high correlation ($r = .67, p < .01$) between quantity (Content A) and adequacy (Intensity). Further, the correlations indicated from whom mothers needed support in order to feel supported. They seem to get more of a sense of support from their networks than from husbands as indicated by the fact that most people support (as compared to husband support) was more highly correlated with all the other support indices. However, it appeared that husband support and most people support worked hand-in-hand, as these two were correlated significantly with one another ($r = .28$, $p < .05$). On the negative side of this relationship, it appeared from the correlations and from the frequency of complaints against husbands among low-Access mothers that there is more pressure on the husband, and on the marriage, if there are no network supports. It is hypothesized for further study that network supports assist the husband in his own transition to fatherhood by relieving pressure, by providing child care models, and by modeling support to the wife. Anticipated reports of clashes between husbands and mothers' mothers did not materialize largely because, perhaps, high Access mothers received much of the support by day when the husband was gone thereby preserving the integrity of the nuclear family for evenings. The only subject who felt her mother had made it more difficult for her husband to get involved was referring to an out-of-town mother's week-long visit.
The network support variable, Community, measured whether the mother had a regular weekly outing, how often she got out of the house each week in the first, second and third months and whether she and her husband were active in a church, club or organization. "Regular weekly outing" often translated to church but for a number of mothers watching the husband play softball or bowl weekly was a regular outing. General "getting out" (in response to questions pertaining to how often mother "got out" in months one, two and three) ranged from going to the store to going out to lunch with friends to going to someone's home to visit. The organizations mothers participated in ranged from churches to professional organizations. Correlations between times out first and second months and organizations indicated mothers didn't appear to resume active participate in organizations until the third postpartum month.

Rituals measured the total of 14 possible rituals and customs the mother participated in. All the mothers had taken educated childbirth and received gifts. Most of the husbands were in the delivery room for the birth and most of the mothers received flowers, had mailed birth announcements, had been honored at a baby shower, and had read childcare literature (magazines but not, generally, books). About half of the babies had been baptized (not an option in every church). Slightly fewer than half had godparents (likewise, not always an option) and had baptism or naming parties. Fewer than half, also, had been able to have immediate contact with the baby after birth. Only one of the 42 mothers in the study had even contacted LeLeche League (for breast feeding mothers), and only four participated in childrearing support groups (all,
through their various churches). Nearly all the mothers had had someone stay with them or look in on them daily during the first week they returned from the hospital. (It is important to mention that the 83% incidence of first-week support in this study is higher than 66% reported by Bowker (1977). Note, too, that first-week support does not confound with other forms of support in this study, as, of the seven mothers lacking first-week support, four were low Access and three were high Access.)

Overlap between network supports will be discussed next. The highest correlation in the network supports matrix was .57 between Access and Dyadic Relations. This seems to indicate that mothers who were accessible to support persons were most likely to get the support they needed. This statement is not as tautological as it may seem. Access was an objective measure of the mother's contacts with her support network while Dyadic Relations measured her perceptions of being supported. That these variables were not perfectly correlated indicates there were circumstances where mothers could have one form of support without the other. Some mothers were high Access, low Dyadic Relations. In one case in point the mother's mother was employed full-time so, even though she was in frequent contact with her daughter, she did not provide the actual supports measured by Dyadic Relations. The opposite situation also occurred. Some mothers received a great deal of support in brief, intense doses when relatives came from out of town. Thus, these mothers were classified high Dyadic Relations, low Access. In all, however, it's not too difficult to see that effectiveness in provision of supports would be enhanced by the support persons' accessibility.
The relationships between Community and Access and Community and Dyadic Relations were also significant. As high Community mothers were those who got out frequently in the postpartum period, Access support may have been facilitative in provision of the mainstay supported person (often a grandmother) as a very willing babysitter. Nearly all of the mothers were reluctant to leave their babies at all and if they did it was only if they had a very reliable sitter. Lacking a reliable babysitter, low-Access mothers were likely to stay home. This is consistent with the data from Dyadic Relations physical support (Content B) items. Two of the items that most differentiated high from low Dyadic Relations mothers were time for the mother to be alone and time to recreate. That is, these low Dyadic Relations mothers felt they were particularly missing support for recreation and alone time. Further, another link between Access and Community may have been that high Access mothers' contacts also provided them some place to go when they got out. For example, for some of the high Access mothers, the regular weekly outing was Sunday dinner at grandmother's. Of course, there weren't perfect correlations between Community and the other support variables, but it can be seen how Access and Dyadic Relations support were facilitative of getting out into the community.

Significant correlations between Size and Access and Size and Dyadic Relations may mean that in larger networks the probability of other supports being provided is increased. Similarly, it may also mean that larger networks are more likely to be free from drain, a conceptualization applied by Garbarino and Sherman (1980) to characterize networks with plentiful resources.
High Rituals families appeared to have a propensity to take part in the traditions surrounding birth and childrearing. That Rituals was significantly correlated with both Size and Community in this sample seems to indicate the visibility of rituals and customs to the new parents is a factor in whether they participate. It is not too difficult to see how that could be. Parents would probably be more likely to baptize the baby if they went to church regularly (if child baptism is the practice of their church). By the same token, if a large number of the new parents' friends had participated in educated childbirth or LeLeche League, new parents would probably be more likely to do so themselves.

It was interesting that few of the network supports were correlated with background variables. For the most part, network supports, then, were available to parents regardless of Income, Education, Sex, or Age. There were two exceptions that bear further comment. The significant negative correlation between Education and Dyadic Relations may be because network members assume educated women are so self-reliant that they don't need help. It could also have meant that educated women didn't want help. However, this possibility was dismissed by noting the high Education mothers had the lowest scores in support adequacy. (High Education Adequacy mean was 5.78; medium Education mean, 5.8; low Education men, 6.75.) Possibly, too, educated mothers experience conflict over requesting help, therefore don't give clear requests to their networks. However, the negative association between Education and Dyadic Relations was probably explained by the tendency of educated women to be separated from extended family. It will be noted that Access and Education were also negatively but not significantly associated ($r = -.16$).
The second correlation between a background variable and network support was between Sex and Access ($r = -.29, p < .05$). This correlation may mean boy babies (Oakley, 1980) attract more network interest or may simply be a spurious relationship.

The relationships among network supports and background variables suggest some directions for further research. Cochran and Brassard (1979) indicated that questions pertaining to who was likely to get network supports were worthy ones for child development research. Certainly, in an education-oriented society, the notion that accompaniments of education, e.g., geographical mobility, may have negative implications for parenthood supports is a provocative hypothesis.

The present study was the first one ever, as far as is known, based upon a network model presented in a major child development journal to guide research pertaining to network and child development. The model presents the assumption that ecological factors influence parenting, and it attempts to organize an approach for delineating how. Prior to the model, studies of network influence have assessed network as one-dimensional or have assessed myriad potential supports devoid of an organizing model or theory. Cochran and Brassard (1979) identified some nine features of network. However, these were condensed to three for the present study. This study indicates the model is somewhat useful for guiding research, however, the combined categories used here (e.g., Access combined Proximity, Continuity, Similarity, and Frequency of contact) appeared to have been more useful than the categories designated by the model. That is, it is very difficult to determine how network Proximity
would have been important to new mothers without taking into account who she was proximal to and how often she saw that person. The model did not include Community or Rituals which one could argue are questionable as network qualities. Whether Community "belongs" to network is open for debate, but findings here suggest it is an important and distinct dimension of the social ecology of the postpartum period. Altogether, the argument of Cochran and Brassard (1979) that network characteristics are complex and need differentiation was upheld by this study, regardless as to whether the best ways to characterize are at the level of specificity indicated by the model or at a more general level as utilized by this study. The dimensions identified in this study may be useful for further child development study.

Analyses of Variance:
Network Supports and Mothering Outcomes

The major hypotheses, stated in the null form, were rejected. Network supports appeared to enhance every mothering outcome assessed in this study. Patterns appeared whereby some network supports were more important for some outcomes. That is, as predicted by the model network supports appeared to influence differentially. Findings pertaining to each mothering outcome--Perception of the Transition, Perceived Competency, Infant-Mother Interaction and Depress-Isolate--will be presented.

**Perception of the Transition**

All the network supports, excepting Rituals, appeared to enhance the mother's Perception of the Transition. In general, mothers with
supports talked about the transition period in totally different terms from how nonsupported mothers talked of it. The supported mothers in every network category not only were generally positive, but some simply couldn't see what the postpartum fuss was all about. On the other hand, the nonsupported mothers tended to comment in terms reflecting an experience laced with emotional and physical exhaustion. "There were times when I really didn't know if I was going to make it." That mothers would perceive their transition as more difficult was expected from the literature (Carveth and Gottlieb, 1976; Oakley, 1980). However, results as a function of the differentiated network supports lend insight to the question of how support helps new mothers. Each of the network supports appears to fulfill a particular function for the mothers in making the adjustment easier.

Dyadic Relations focused on the mother's perception of support. An examination of Dyadic Relations content items gives a fairly clear picture as to why these nonsupported mothers perceived the transition as more difficult. Of the 24 physical and emotional support content items, those that most differentiated the high from the low supported mothers were as follows: relief from normal duties when extremely tired so she could rest; relief in baby care when extremely tired so she could rest; time to be alone; time to recreate; reassurance she was doing a good job; general help in building confidence in mothering and help in accepting herself when she came emotionally unstrung. These items make it apparent that low Dyadic Relations mothers were particularly unable to rejuvenate. They were consequently unable to avoid reaching extremes
of physical and emotional exhaustion and discouragement. That "coming unstrung" was one of the central support-related issues is particularly interesting. The possibility that loss of control in the postpartum period has implications for later loss of parenting control may be a worthwhile future research hypothesis. Altogether, the support from Dyadic Relations appears to have most importantly cushioned the mother from reaching emotional and physical extremes. This point is further accentuated by the fact that Dyadic Relations stood out among the network supports for 1st Month. That is, Dyadic Relations was most important when the chances of reaching physical and emotional extremes were probably the greatest.

Next, Access was an objective measure of the mother's contacts with accessible, supportive people. That Access was significant for every Perception of the Transition item whereas Dyadic Relations had only been significant for four of the five may indicate that Access is related more than Dyadic Relations to a positive Perception of the Transition. The particular significance of Access is consistent with findings of Rohner (1975) and Whiting and Child (1953) both of whom, with focus on parents of older children, noted the importance of the presence per se of other adults in the childrearing regimen. As has already been discussed, Access correlated highly in the present study with Dyadic Relations. Thus, mothers who had accessible support people were more likely to get the rejuvenation support. Second, Access in the form of the daily contact (high Access mothers had daily contact with their networks) may have provided the mothers preventative doses of problem solving, feedback,
stimulation and encouragement. Although the mothers did not regard these daily contacts, usually phone calls, as necessarily supportive, the calls appeared to have afforded the mother some daily maintenance.

Third, having Access support provided the mother with a sense of security that she could "always get help when she needed it." Indeed, the low Access mothers were wont to make comments such as, "There was no one to turn to." The investigator's observation was that many of these mothers were tense about such things as exposing the baby to germs and disrupting the baby's or her own schedule. While high Access mothers weren't deliberately exposing or interrupting their babies, these mothers seemed more flexible and less anxious. The low Access mothers simply couldn't afford for either them or their babies to get sick or even off-schedule.

That Size was significant for so many of the Perception of the Transition variables (all but one) was rather surprising. Perhaps having a large network is an indirect support; as mentioned already a large network may increase the probability of other supports being provided. Network Size may even be a direct support by giving the mother the comfortable feeling there is always someone to call on. Similarly, a mother may actually call upon support persons more readily because she feels she hasn't used anyone to excess.

Community assessed the extent to which the mother "got out" of the house and into the larger community. The importance of "getting out" is alluded to in popular literature, yet what it did for mothers in this study is illusive. Getting out appeared to have been a tonic for the mother in the early months, breaking the intensity of constant child care.
It is difficult to know, however, whether mothers got out because they felt they had the postpartum situation under control or if getting out gave them the perspective and rejuvenation to get the situation under control. That Community was correlated with Access meant mothers who got out often had an accessible babysitter as has already been discussed. It is possible that mothers who did not know anyone with whom they could comfortably leave the baby felt they couldn't get out. Therefore, they may have felt trapped. The importance of Community to the Perception of the Transition does suggest that getting out works together with other supports to enhance the mother's sense of well-being.

Of the Perception of the Transition variables, the variable "Easy Baby" deserves particular attention. While links between support and a sense of having had an easy transition overall have been reported before, the link between the mother's perception of the baby and network support is new. Given the importance of the mother's perception of the baby to the relationship later (Broussard & Hartner, 1970), the findings of the present study will be discussed further. The significant effects for Dyadic Relations may indicate that mothers unrelieved from the extremes of exhaustion magnified problems, or they may have gotten into cycles (Spock, 1970) whereby eagerness to get the child to sleep fed into the child's inability to relax. It's not too hard to see how a child who wouldn't or couldn't sleep would seem difficult to an exhausted mother. Similarly, emotional supports that were given to high Dyadic Relations mothers may have helped them and, consequently, the baby to relax. Thus, the easiness of the baby may have been directly influenced by the state
of the mother (Bibring, 1961). Mothers with Access support simply had someone to hand the child to, defusing negatively intense situations. In addition to making the care load easier, the presence of someone to hand the child to could affect the mother's image of the child. Knowing she had a helper could lead the mother to think, "I'm tired and ineffective now; you take him," instead of, "I don't know what's the matter with him." The significant effect for Access with Easy Baby in the study reinforces the findings of Rohner (1975) whereby mothers of older children who had other adults in the childrearing regimen were more accepting vs. rejecting of their children. Finally, Size and Community may impact the mother's concept of her child by reinforcing the notion that the child's difficulties, if present at all, are normal. That is, the mother may gradually develop a picture of what infants are like through continuous exposure to the feedback of a large number of persons. Some mothers didn't want to take their babies out into the community because they were afraid the baby would cry; mothers who did take the baby out, however, quickly gained the assurance that babies do that and that most people understand. Although this study supports the general idea that there is dynamic interplay between the mother's social network and her concept of her baby, additional research is necessary to further investigate the interplay.

A final note pertaining to the Perception of the Transition is the finding that mothers of girls and mothers with high Education had a more difficult adjustment (Easy Adjust). High Education mothers also were less Settled. With only one of five significant differences (for Sex)
and two of five significant (for Education), Sex and Education were not considered major factors in accounting for Perception of the Transition variance, however, it is important to note that Educated mothers may have a more difficult adjustment because they appear to have more changes to make, and they may expect motherhood to be simpler than it is. Mothers of girls may have to contend with disappointment at some level or with a sense of greater involvement with the baby (Oakley, 1980) or the role for Sex in this study may be spurious. Some of the effect for these variables may be accounted for by confounding as Sex and Education were both significantly correlated with Dyadic Relations.

**Perceived Competency**

It was concluded from the study that network supports, with the exception of Community, did not play an important role in the mother's sense of her own competency. This finding was not as expected from the one other study measuring Perceived Competency as an outcome (Abernathy, 1973). Abernathy, in finding a significant effect for network with mothers of older children, theorized network feeds the mother's sense of competency by feedback and corroboration of practices. This theory would lead to the expectation for Access and Community to be associated with Perceived Competency as these variables would reflect the opportunity of the mother to have input from others. It would further be expected that Dyadic Relations could have augmented the mother's overall sense of mastery.

Community was significant for three of the outcome measures for Perceived Competency, but other supports did not show a strong pattern
of effect. While the unsupported mothers were free in admitting the transition had been very difficult, they may have been reluctant to believe their babies had been shortchanged. After all, throughout this time period, they had done their best. Further, the baby was who all this had been for. That Community effects, however, stood out in importance to Perceived Competency seems to say that mothers who "holed in," possibly because they were missing important stimulation and relaxation, may have gotten bogged down when it came to the day-to-day aspects of mothering, not enjoying the babies as much, not feeling as good about the relationship or about themselves as mothers.

Even though there were several significant relationships, enough to indicate the null hypothesis should be rejected, the general pattern does not indicate a resounding affirmation for the importance of network supports in Perceived Competency. However, that so many of the Perceptions of the Transition variables were significantly associated with many of the Perceived Competency variables, as has been discussed, indicates there may be an indirect effect for network supports on Perceived Competency. A latency effect could also be hypothesized. That is, as it appeared many of the unsupported mothers were determined to believe they were doing a good job, their Perceived Competency may not vary as a function of early network support deficits until later in the mothering experience.

Infant-Mother Interaction

It is interesting that even though unsupported mothers perceived themselves as no less competent for the most part than supported mothers,
the data indicated they were not responding as fully on the two indices of interaction. The findings that Dyadic Relations and Access were significant for both HOME MERV and Synchrony were probably the most important ones of the study. That network supports would somehow be facilitative of mother-child interaction has been theorized by Brazelton (1980) but never before empirically demonstrated. It is important to note that not all the network supports were significant for the interaction measures. Those that were are Dyadic Relations and Access (for both), and Community (for HOME MERV only).

If, as it appears, network supports enable the mother to be more responsive and synchronous in interaction, it may be that mothers who are exhausted respond to the baby's care needs but not totally to communicative cues. It may be that these mothers partially and unconsciously shut themselves down during the interaction as hypothesized by Stern (1977). It is also possible that in the continuum of human experience the mother who has her own needs responded to carries a mental set that says, "Needs are to be responded to in full." She may then apply to the baby what has come to her, while the inverse may be that mothers who feel shut off may do the same, inadvertently, to their babies. Still another possibility is borrowed from Lamb (1977) who found that mothers interacted more with their babies when fathers were present. It is not unreasonable to think that a mother might be similarly stimulated by grandmothers', friends' and relatives' interactions with her child. That there was a connection found in these data between Access/Dyadic Relations, and Infant-Mother Interaction bears out the assumption sometimes offered in
the infant-mother interaction literature that successful interactions are
influenced by the social milieu. Because these data are among the first
to document such a relationship they definitely call for replicative
research.

Depress-Isolate

The findings pertaining to the post hoc mothering outcome, Depress-
Isolate, indicate that the two components of this outcome were influenced
by the network supports, Access and Community. The finding corroborates
Oakley's (1980) contention that postpartum depression is a function of
social contextual factors indigenous to modern societies. The data in
this study directly implicate isolation in depression.

It was observed in the sample that mothers who believed they were
depressed and isolated were alone and at home a great deal of the time.
These women were further largely "undisturbed" by phone calls or visits
from either intimate or casual friends and acquaintances. It is the
loneliness, the alienation from meaningful adult contact, that may have
been associated with the depression.

In summary, it is concluded that network supports appear to make
important differences to all four forms of mothering outcomes measured
in this study. The findings call for replicative research.

Limitations

The major limitation of the study, as seen by the investigator, has
to do with the lack of demonstrated reliability and validity of a number
of the measurements.
There simply is no instrumentation for assessing network characteristics at the level of specificity sought in the present study. The assessments used here, at least, were derived from two other more general assessments of network (Garbarino & Sherman, 1980; Abernathy, 1973) as well as from a model (Cochran & Brassard, 1979). The practice in the present study of using multiple criteria for three network supports may have enhanced the reliability and validity of the assessment of network supports. That is, because a mother needed to meet several criteria before it could be said that she was "high" for a network support, the chance of incorrectly stating a mother had a support when she did not actually have it was minimized. The opposite problem was more likely--that a mother did receive generally high support but was classified as low due to the stringency of the criteria. Probably, it would have been more accurate to have identified the network supports categories as "high" and "not high." A fourth network support, Size, was somewhat reliable because mothers were asked to identify who their support persons were on the PSQ, then during the interview they were asked if there were any changes they wished to make to the original list. In the whole sample there were no more than three changes and these involved adding a support person who had originally been overlooked. Furthermore, the technique of self-identification of network supports is considered a valid way to measure network Size (Garbarino & Sherman, 1980). Of all the network support measures, the assessment of Rituals is probably most open to question. There is considerable doubt as to whether the customs and rituals truly are additive as is presumed here. In addition, for
many of the items there was very little variance—either most of the
mothers participated or few did. Thus, the final Rituals variance was
generally due to variation in three or four customs and rituals. Since
Rituals did not emerge as an important network support, if the measurement
difficulties influenced the outcomes the error would have been on the
side of conservatism. That is, Rituals could have been more, but not
less, important than was found to be the case in the present study.
Altogether, the network supports, excluding Rituals, developed for the
study may represent some advance to the study of network characteristics.
The Perceived Support Questionnaire may present more reliability and
validity problems than do the measures of network supports. Here too,
making judgments on the basis of multiple criteria may have offset the
problem to some extent however, multiple criteria were not (and could not
be) used as stringently as for network supports...to draw a single score.
Occasionally, mothering outcome measures were singled out for discussion
(witness Easy Baby in this discussion), but for the most part no con­
clusions were based on only one significant finding.
Further, pertaining to construct validity, it is important to point
out that the PSQ measured "perceptions," not qualities of mothering per
se. It would appear that it would be easier to validly measure a
"perception" of an aspect of mothering than the quality itself. For
example, compare measuring "perception of the adjustment" to measuring
"adjustment." It would appear that the construct validity issues would
be greater in the latter case, because it is very difficult to define
what "adjustment" really is. Pertaining to reliability of the per-
ceptions measure, it is recognized that mother's opinions on any one question may change, but the questionnaire does make it clear to the mothers that they are to respond on how they feel "this day." Therefore, the questionnaire measures mother's perceptions on the day of assessment.

The grouping of the Perception of the Transition and the Perceived Competency variables is open to some question since these groups didn't have total discriminative validity. That is, the measures of mothering outcomes did correlate within groups but, although not consistently, they also correlated somewhat across groups. Depress and Isolate made a clear statement that they belonged together, but it could be argued that the other two perceptions of motherhood outcomes could have been collapsed into one. They were not for three reasons. First, they were not collapsed because there is a conceptual difference between Perceptions of the Transition and Perceived Competency. Second, the integrity of these outcomes was also maintained because they showed differential responsiveness to the network supports. Finally, the possibility that the correlations between Perception of the Transition and Perceived Competency are cause and effect can't be ruled out. Therefore, it still seems as though the grouping as presented was the best way to handle the data.

The problems of validity don't apply so much to Infant-Mother Interaction measures as both procedures have been used before as measures of interaction. The major reliability problems that may apply to the interaction measurements have to do with the naturalness of the mother's behavior in being videotaped or in being observed. Most of the HOME MERV observation elicitation techniques occurred in the course of the
conversation. Therefore, it is doubtful that there was an altering of behaviors. It is possible that the mother's behavior changed for video taping. It's hard to make a video camera unobtrusive, but for the most part mothers seemed relaxed regarding the video taping, and since they did not know until after the taping that the interaction was what was of interest, it is doubtful that they altered their interaction much for the camera.

There may have been some bias in the sample due to self-selection, but it is difficult to know if the characteristics of mothers who refused to participate were different in any way from those accepting. As noted before, the greatest reason for refusal was objection to the video taping among breast-feeding mothers but these declining mothers, as determined from their addresses which indicated the approximate housing area in which they lived, did not appear to represent a particular income-bracket or were no more likely to have boys than girls. There was a tendency for Education and female Sex of babies to be significantly correlated in the sample, but it is difficult to know why. Because none of the background variables were consistently significant for all or even most of the measures of an outcome, the potential bias in the sample probably did not pose a major problem for the data. An observer may note that the sample altogether seems skewed high for Income and Education. Yet, the sample appears to represent the population of the predominantly white, middle-class community from which it was drawn. Interviews were conducted in every section of town, and it is doubtful that there is any bias in the sample except whatever was caused by the self-selection process.
Practical Implications

The study provides some very specific practical suggestions for new parents. It does this on several levels. It documents the value of support; it isolates specific types of support; it determines the relative importance for different types of supports for different periods and different outcomes; and from the interviews, it provides numerous tips that may be useful to other mothers. Altogether, then, the study offers numerous suggestions to new parents for the best possible support systems.

First, the data make it clear that mothers who have support are likely to be better off than those who don't. It should now be possible for a mother to assess her support situation prior to the baby's birth and to justify help if she doesn't have it.

Knowing that she needs support doesn't tell a mother if she has arranged enough of it. It was interesting that most of the mothers did not realize ahead of time how or how much they would need support. Many women had planned to be mothers and seemed not to imagine that taking care of a baby would be a challenge to them. Further, most of the mothers in this sample would have said prior to their baby's birth that they were well-covered, as most of them had someone lined up for the first postpartum week. Yet, these data show the need for support to be greater than what one can get in the first week. In this sample, the mothers who were well-supported had a major support person checking in on them two to three times a week throughout the postpartum period.

The data certainly suggest a doula as recommended by Brazelton (1980) for couples without extended family in town would be useful. Should such
a person be available, she would probably need to visit more often than once a week. It would be also important for her to provide physical supports as well as mothering education. Currently, many hospitals sponsor one or two phone calls to the mother during the two weeks after the baby goes home. Mothers in the sample, however, questioned the value of a general phone call. A general visit by a doula could be similar. Thus, the importance of the doula rolling up her shirt sleeves and doing what a grandmother would do would need to be emphasized.

During the first month the physical supports that are likely to make the biggest difference to the mother's sense of well-being are relief from other duties and from child care when mother is extremely tired so she can rest; relief from other duties so she can have time for recreation, and relief from other duties so she can have time to be alone. While numerous other helps seem to have been appreciated, it was the presence of a caring person preventing the mother from reaching her breaking point that seemed to make the biggest difference. A number of mothers indicated that it seemed hard for others to realize just how tired they were. Network members may need to be informed about the mother's exhaustion potential. Network members and husbands, too, may need special realization of the mother's need to be alone. Further, while individuals probably wouldn't think the tired-out mother looks up to a match of tennis, recreation appears to be very important.

In terms of emotional supports, here too, there were some that seemed to make a big difference. Mothers seemed to need to hear they were doing a good job. What they didn't need were "support people" who
came in and tried to improve on their baby care practices or who questioned their practices as some mothers-in-law were wont to do.

Finally, if a mother did come "unstrung" from time to time, as seemed to happen to most of the mothers in the sample, she needed to be reassured that she was still a competent person. The network may need to take a cue that the mother is probably pushing herself too hard, and may need to step-up other supports.

Mothers may need to make more effort to get out. If mothers weren't members of churches or organizations and didn't have an Access person to visit, many didn't have any place to go other than shopping. Further, beginning motherhood is not the time a woman is likely to start a new community contact. In fact, beginning an organization, even one like LeLeche League or a new parent support group, seemed like a huge step for these mothers. Mothers would do well to build an outlet before the birth that they could return to afterwards. Going to church, softball games, bowling, or any regular outing may also need to be built into the post-partum package. Planning to participate in rituals such as baptism or customs such as childrearing education groups may not make a big difference directly but might help the mother get out.

Even though the husband has been somewhat of a shadow person in this study, the importance of the husband and father to the mother and baby is not negated in any way. In an era of increasing active involvement of fathers in child care with benefits for both parents and children, this study simply adds the suggestion that even very active and supportive new fathers may need their efforts supplemented by network helps. The data
also offer the hypothesis that the father needs support himself in the transition to parenthood. The data suggest to new parents if they are experiencing overload conflicts they would be wise to get outside assistance (as opposed to examining one another for character flaws).

All in all, it appears the best way to usher new mothers smoothly into new motherhood (and to provide support to the father as well) is for her to have around her a contingent of experienced and trusted others who both nurture and teach her as the new mother (and father too) learns to nurture the child. The rhythms of early motherhood depict a regularity of contact with supporters together with a regularity of outings. But, just as the synchronous interaction is characterized not by a solid or stolid behavior but rather has a light beat of back and forthness, there is a rhythm of in and outness, home and widerworldness that seems important for the mother to catch. Further, how interesting that the picture of a nurturing network presented here is so similar to how motherhood has been begun for eons in numerous undeveloped societies throughout the world (Brazelton, 1980).
REFERENCE NOTES


BIBLIOGRAPHY


Ballinger, C., Buckley, D. E., Naylor, G. J., & Stansfield, D. Emotional disturbance following childbirth: Clinical findings and urinary excretions of AMP. Psychological Medicine, 1979, 9, 293-300.


Blumberg, N. L. Effects of neonatal risk, maternal attitude and cognitive style on early postpartum adjustment. Journal of Abnormal Psychology, 1980, 89, 139-150.


Polansky, N., Chalmers, M., Buttenwieser, R., & Williams, D. The isolation of the neglectful family. American Journal of Orthopsychiatry, 1979, 49, 149-152.


Rohner, R. They love me, they love me not: A worldwide study of the effects of parental acceptance and rejection. New Haven, Conn.: Human Relations Area Files Press, 1975.


Senechal, P. Long term effects of early mother/infant contact. Journal of Family Practice, 1979, 8, 511-516.


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I wish to express gratitude to individuals in both Iowa and Nebraska for their stimulation, guidance and encouragement as this dissertation was being formulated and written.

Dr. Sam Clark was consistently patient, attentive and helpful in his direction. I am sure the challenges of directing an out-of-state student were greater than the norm but he weathered them admirably. I also express appreciation to other members of my committee who, together with Dr. Clark, encouraged me in exploring on a graduate level a research area where there are few established methodologies or even general guideposts.

The administrators of the media division of Nebraska Educational Television allowed me to use video taping equipment without restriction or rental. Their generosity in supporting a non-University of Nebraska student is testimony to the existence of a university in the broad sense--without boundaries.

The mothers I have known--both as friends and as subjects for this study--through their emotional and intellectual honesty have made this study possible. In my belief, few are so devoted or courageous as mothers who can acknowledge their frustrations and frailties while simultaneously affirming their commitment and devotion to their children. They take on the risk of sharing this contradiction because as they said time and time again, they "want to make a contribution...for other mothers."

Finally, my own mainstays throughout this project have been my husband and children. To my husband, who helpfully read and criticized
while under the auspices "retired professor" and to our daughters who showed they not only could postpone wishes but also cook, clean and encourage, I am deeply grateful. Finally I must also acknowledge my brother-in-law, Jeff, who provided me with software for both computations and text editing and in so doing took me over the threshold of the microcomputer.
APPENDIX A.

LETTER AND PERMISSION FORM SENT TO MOTHERS.
Dear

As you know from our phone conversation, you have been asked to participate in a research project. The purpose of the project, which is for my doctoral dissertation in child development, is to find out what helps new mothers are getting and to find out if support helps women in the adjustment to motherhood.

In the past year two well-known women authors (Anne Oakley in Women Confined and Phyllis Chesler in With Child) have suggested that modern societies don't provide enough supports for women beginning motherhood, but there have been few studies to determine what the effects of having or not having support are.

What is being asked of you? Again, you are among 100 new mothers being asked to fill out the enclosed questionnaire. It will probably take about 20 minutes. From among you, 30 mothers will be interviewed individually in their homes at their convenience. Interviews will center on who the support people are; views of motherhood and mothering practices. I am also interested in videotaping about 10-15 minutes of an everyday infant-mother activity, feeding. The interview-taping session will take approximately two hours. I can assure you that all responses to all questionnaires, interviews and tapes will be kept confidential and that all records and tapes will be destroyed/erased as soon as the project is complete. No names will ever be used on any questionnaire, report or discussion of the project.

Since the 30 mothers who participate in the interview will be giving quite a bit of their time, I'd like to offer some compensation, tentatively, two workshops on activities to enhance infant development, but I'm open to suggestions.

I know that I am asking you to share of your time and of yourself at a time when you are already deeply absorbed. I really appreciate your contribution and will make every effort to work flexibly with yours and your baby's schedule. Hopefully, this will be an interesting experience for you as well. After you have read the enclosed consent form, will you complete it and the Perceived Support Questionnaire and return them to me using the enclosed envelope? If you have any questions, don't hesitate to call me at 483-7278. Thanks again!

Sincerely,

Helen Raikes

Sam Clark
Professor and Head
Department of Child Development
Informed consent

I have read the account of the proposed research and understand its purpose and procedure. I agree to fill out the enclosed questionnaire and if selected, to participate in follow-up interviewing and taping. I understand that my infant will be included in the taping. However, I also understand that I can refuse to answer any questions asked of me in the course of the research and that I can drop out of the project at any time.

________________________________________
Signature

________________________________________
Date
APPENDIX B.

PERCEIVED SUPPORT QUESTIONNAIRE
I am interested in learning more about the supports new mothers feel they have. Support here refers to the help and assistance as well as information, encouragement, and acceptance a mother received after the birth of the baby. The following questions are concerned with a variety of supports that new mothers may have received. Unless otherwise indicated, when you answer each question, keep in mind the whole period from the time your baby was born until today.

Some of the questions require you to circle the number (1 to 9) that best represents a degree of support received. Respond "1" if the support the quality described was little. Respond "9" if the support for the quality was a great deal. Other questions require a "yes" or "no" response, a choice or one among several responses or are open-ended.

1. Altogether how much support do you feel you have received throughout the three months since your baby was born?

1 2 3 4 5 6 7 8 9

Very little A great deal

2. Some women say they have support but they may not feel it has been exactly what they needed. To what extent have you been getting the helps that you needed?

1 2 3 4 5 6 7 8 9

Not at all To a great extent

3. How supportive (helpful, encouraging, accepting) has your husband been?

1 2 3 4 5 6 7 8 9

Not supportive Very supportive

at all

4. How supportive have most the people around you been?

1 2 3 4 5 6 7 8 9

Not supportive Very supportive

at all

5. How many real support people do you feel you have?

Who are they (relationship to you)?

__________________________

__________________________
6. The next questions have to do with supports for meeting yours and the baby's physical needs. The items that follow were the most frequently mentioned physical support needs reported in a recent survey of mothers of newborns in Lincoln. How much support did you receive in relation to each of the needs listed below? (If you received a great deal of that form of support, circle "9", and if you received very little, circle "1". If the support need didn't apply to you, circle "N".)

<table>
<thead>
<tr>
<th>Item</th>
<th>Very little</th>
<th>A great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Relief in the care of your baby when you were extremely tired so you could rest.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>b. Relief from other duties when you were extremely tired so you could rest.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>c. Help with your normal duties so you could spend time with the baby.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>d. General help in care of your baby.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>e. Useful tips having to do with baby's feeding patterns.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>f. Useful tips having to do with establishing or maintaining your milk.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>g. Clothing and/or supplies given to you.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>h. Useful suggestions having to do with baby's late afternoon/early evening fussiness.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>i. Care provided for baby so you could be alone.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>j. Care provided for baby so you could get other things done.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>k. Errands run for you.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>l. Care provided for baby so you could take part in some recreation (not specifically to be alone).</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
</tbody>
</table>

If someone (i.e., your mother) was particularly notable for providing any of the supports listed above, indicate who that was in the blank to the left of the item. Do not fill the blank if no one stands out for providing that form of support.
136

7. These questions have to do with supports for directly meeting yours and/or your baby's emotional needs. These items were the most frequently mentioned emotional support needs reported by Lincoln mothers of newborns. How much of each of the following forms of emotional support did you receive? (Again, "9" represents a great deal, "1" represents very little. If a need doesn't apply to you, circle "N".)

<table>
<thead>
<tr>
<th>Support</th>
<th>Very Little</th>
<th>A Great Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Reassurance you were doing a good job.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>b. Support by others indicating they had experienced similar feelings as yours.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>c. Transmission of idea that whatever you were feeling, it was probably normal for new mothers.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>d. Praise for your general approach to mothering.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>e. Idea that adjustment to new baby may be difficult.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>f. Reassurance that some of your feelings were related to physical and hormonal factors.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>g. Help in dealing with not being able to get much done.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>h. General helps in developing confidence in your mothering.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>i. Relief in care of the baby when you felt you were coming emotionally unhinged.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>j. Help in accepting yourself when you felt you were coming emotionally unhinged.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>k. Idea that you have a very important task in meeting the baby's emotional needs.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
<tr>
<td>l. Help in working through mixed feelings in relation to working or staying home.</td>
<td>1 2 3 4 5 6 7 8 9 N</td>
<td></td>
</tr>
</tbody>
</table>

Again, IF someone was particularly notable for providing a particular form of support, indicate who.
8. In addition to your husband, did anyone stay with you anytime within the first two months after the baby was born? Y N

If so, who? How long?

Was that person helpful? Y N Sometimes
Comments:

9. Have you had contact with a support person(s) on a regular basis (besides your husband)? Y N

If so, who? How much contact?

10. Altogether, besides the support you have received from your husband, how often have you had some form of support?

a. Every day
b. Every other day
c. A couple of days a week
d. Once a week
e. Every other week or so
f. Monthly
g. Other:______________

11. Do you think there were extenuating circumstances in your case that may have increased your need for support? Y N

If so, what were those circumstances?_________________________________________

12. Were you employed within three months before the baby was born? Y N

13. What is your family's approximate income/year? Circle one.

a. under $10,000/year
b. $10,000-$15,000/year
c. $15,001-$20,000/year
d. Over $20,000/year

14. What is your educational level?

a. some high school
b. high school
c. some college
d. junior college or technical degree
e. bachelor's degree
f. advanced degree

15. Are there any overall comments you'd like to make about your supports?
### APPENDIX C. VARIABLES AND ITEMS OF PERCEIVED SUPPORT QUESTIONNAIRE

<table>
<thead>
<tr>
<th>Variable</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dyadic Relations</strong></td>
<td></td>
</tr>
<tr>
<td>Intensity of Dyadic Relations</td>
<td>To what extent did you receive the support you needed?</td>
</tr>
<tr>
<td>Directedness of Dyadic Relations</td>
<td>How supportive has your husband been?</td>
</tr>
<tr>
<td>Content of Dyadic Relations</td>
<td>How supportive have most people around you been?</td>
</tr>
<tr>
<td></td>
<td>How much support overall have you received?</td>
</tr>
<tr>
<td></td>
<td>How much of each of the following kinds of physical support have you received?</td>
</tr>
<tr>
<td></td>
<td>1. Relief in care of the baby when you were extremely tired so you could rest.</td>
</tr>
<tr>
<td></td>
<td>2. Relief from other duties when you were extremely tired so you could rest.</td>
</tr>
<tr>
<td></td>
<td>3. Help with your normal duties so you could spend time with the baby.</td>
</tr>
<tr>
<td></td>
<td>4. General help in care of the baby.</td>
</tr>
<tr>
<td></td>
<td>5. Useful tips having to do with the baby's feeding patterns.</td>
</tr>
<tr>
<td></td>
<td>6. Clothing and/or supplies given to you.</td>
</tr>
<tr>
<td></td>
<td>7. Useful suggestion having to do with the baby's late afternoon/early evening fussiness.</td>
</tr>
<tr>
<td></td>
<td>8. Care provided for the baby so you could be alone.</td>
</tr>
<tr>
<td></td>
<td>10. Care provided for baby so you could take part in some recreation (not specifically to be alone).</td>
</tr>
<tr>
<td></td>
<td>11. Useful tips having to do with establishing or maintaining your milk supply.</td>
</tr>
<tr>
<td></td>
<td>12. Care provided for baby so you could get other things done.</td>
</tr>
<tr>
<td></td>
<td>How much of each of the following kinds of emotional support have you received?</td>
</tr>
<tr>
<td></td>
<td>1. Reassurance you were doing a good job.</td>
</tr>
<tr>
<td></td>
<td>2. Support by others indicating they had experienced similar feelings as yours.</td>
</tr>
</tbody>
</table>
3. Transmission of idea that whatever you were feeling, it was probably normal for new mothers.
4. Praise for your general approach to mothering.
5. Idea that adjustment to a new baby may be difficult.
6. Reassurance that some of your feelings were related to physical and hormonal factors.
7. Help in dealing with not being able to get much done.
8. General helps in developing confidence in your mothering.
9. Relief in care of the baby when you felt you were coming emotionally unhinged.
10. Help in accepting yourself when you felt you were coming emotionally unhinged.
11. Idea that you have a very important task in meeting the baby's emotional needs.
12. Help in working through mixed feelings in relation to working or staying home.
APPENDIX D.
ITEM GENERATION FOR PERCEIVED SUPPORT QUESTIONNAIRE
Dear mothers of newborns,

I am beginning a study of support systems available to new mothers. The study is for my doctoral dissertation in child development from Iowa State University.

The enclosed questionnaire is to help me develop a way of measuring how much support (help, encouragement, information and understanding) mothers actually get, and I would greatly appreciate your filling it out and returning it to me within a week using the attached self-addressed envelope. I am a mother myself so I know how busy you are these days, but it shouldn’t take you more than 10 minutes (if that) to fill it out. As these questionnaires aren’t even coded, your responses will be completely anonymous.

Note that the questions refer to the first three months after the baby’s birth and that I am interested in your needs for support after the birth of the first child. If your newborn is not your first will you fill out the questionnaire according to the needs you had when your first child was born?

Thank you. I really appreciate your help! I hope eventually to be able to make some recommendations about what new mothers need in the way of sensitive supports. If you would like to discuss the questionnaire or the topic of the research, feel free to call me at 483-7278.

Sincerely yours,

Helen Raikes
The following is a list of ways mothers state physical support helps them in the months after a new baby is born. Physical support refers to aides or services ranging from actual assistance to ideas or perspective for either mother or baby's physical care. Please rank order each of the items according to how you feel physical support would have aided you (or did aid you) the most in making the best possible adjustment to new motherhood.

- Place a 1 in the blank to the left of the item that best represents where support would have helped (or did help) you the most in the first three months after your first baby was born. Place a 2 before the second most helpful item and a 3 before the third most helpful, and so on until you have ranked your top 10 choices.

- If an area of needed physical support for you is not included on the list, fill it in the blank indicated "other" and rank it.

1. Relief in the care of the baby when you were extremely tired so you could rest.
2. Relief from other duties when you were extremely tired so you could rest.
3. Help with your normal duties so you could spend time with the baby.
4. General help in care of the baby.
5. Transportation for such things as doctor's appointment.
6. Someone to accompany you for such things as doctor's appointment.
7. Tips having to do with baby's feeding patterns.
8. Tips having to do with establishing or maintaining your milk supply.
10. Tips having to do with baby's sleep patterns.
11. Tips having to do with routine baby care, i.e., diapering, bathing.
12. Suggestions in establishing best supplies and in their use.
13. Clothing and/or supplies given to you.
14. Suggestions having to do with baby's late afternoon/early evening fussiness.
15. Suggestions having to do with baby's general fussiness.
16. Care provided for baby so you could exercise.
17. Care provided for baby so you could be alone.
18. Care provided for baby so you could get other things done.
19. Errands run for you.
20. Care provided for baby so you could take part in some recreation (not exercise or specifically to be alone).
22. Suggestions and guidance in care of an exceptional baby.
23. Other:
24. Other:
25. Other:
The following is a list of ways mothers state emotional support helps them in the months after a new baby is born. Emotional support refers to assistance, ideas, encouragement, perspective relating directly to meeting either mother's or baby's emotional needs. Please rank order each of the items according to how you feel emotional support would have aided you (or did aid you) the most in making the best possible adjustment to motherhood.

- As before, place a 1 in the blank to the left of the item that best represents where support would have helped (or did help) you the most in the first three months after your first baby was born. Place a 2 before the second most helpful item and a 3 before the third most helpful, and so on until you have ranked your top 10 choices.

- If an area of needed physical support for you is not included on the list, fill it in the blank indicated "other" and rank it.

1. Reassurance you were doing a good job.
2. Reassurance you could do a good job.
3. Reassurance that some of your feelings were related to physical and hormonal factors.
4. Acceptance of your negative feelings.
5. Idea that whatever you were feeling was probably normal for new mothers.
6. Idea that adjustment to a new baby may be difficult.
7. Idea that you are very important to this baby because you and your husband are the ones the baby needs to relate to.
8. Idea that establishment of the infant-parent bond is a very important one.
10. Admiration of the baby.
11. Idea that you have a very important task in meeting the baby's emotional needs.
12. Idea that you have a very important task in meeting the baby's physical needs.
13. Interest in baby's development.
14. Openness to your feelings.
15. Emphasis on the richness of what baby can perceive.
16. Praise for specific things you are doing with your baby.
17. Praise for your general approach to mothering.
18. Reassurance that you are really reading the baby's cues right.
19. Reassurance that you really are making right decisions about baby's care.
20. Help for you in getting in tune with your baby presented in a supportive way.
22. Help in seeing what baby was really interested in.
23. Acceptance of your body.
25. Help in developing a philosophy of early infant care.
27. Reassurance or presentation of idea that your feelings for the new baby would grow and change.
28. General understanding of your new mothering feelings.
29. Understanding of your working person-new mother feelings.
30. Encouragement of you to seek outlets or to or to return to work if it seemed like the best thing for you.
31. Help in working through ambivalence in relation to working or staying home.
32. Help in dealing with not being able to get as much done.
33. Help in working through your feelings about the value of nursing.
34. Help in working through your feelings about the kind of mother you want to be.
35. Help in working through feelings about the kind of mother you think you are vs. what you expected for yourself.
36. Help in accepting yourself when feeling you are coming emotionally unhinged.
37. Understanding when you felt you were coming emotionally unhinged.
38. Help in care of the baby when you felt you were coming emotionally unhinged.
40. Support by others indicating they had had similar feelings as yours.
41. Admiration expressed of you as to your womanliness.
42. Help in breaking through a feeling of isolation.
43. Support by others indicating they had had similar feelings as yours.
44. Perspective that children have reasons for doing what they do.
45. Perspective that newborns perceive much more than they are given credit for.
46. Concrete reasons suggested as to why infant may be doing what he/she is doing presented in a helpful way.
47. Help in dealing with general depression.
48. Other:
49. Other:
50. Other:

Comments in general about the needs of new mothers:

Please turn the page over.
Part III

How much did your baby weigh at birth?__________________________________________

Are you breast or bottle feeding? breast bottle

Did you breast or bottle feed when you left the hospital? breast bottle

Did you have any complications during the pregnancy? Y N
If so, what were they?_____________________________________________________

Did you have any complications during the birth of this baby? Y N
If so, what were they?_____________________________________________________

Has the baby developed any complications or difficulties since birth? Y N
If so, what have they been?_______________________________________________

Are you employed now? Y N

Were you employed within three months before the baby was born? Y N

Do you plan to return to work before the baby is six months old? Y N

How many other children do you have? ______

How old are you?__________

What was your approximate family income last year?___________________________

What is your racial/ethnic background?_______________________________________

What is your educational background?
__ some high school
__ high school
__ some college
__ junior college of technical college degree
__ four year college degree
__ advanced degree

Thank you very much.
## APPENDIX E. VARIABLES AND ITEMS FROM INTERVIEW

<table>
<thead>
<tr>
<th>Variable</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>How many support persons have you had since the birth of the baby? Who are they?</td>
</tr>
<tr>
<td>Access</td>
<td></td>
</tr>
<tr>
<td>Proximity</td>
<td>How close-by is each person?</td>
</tr>
<tr>
<td>Frequency of contact</td>
<td>On the average, how many days of the week do you have contact with each person?</td>
</tr>
<tr>
<td>Similarity</td>
<td>What is each person's relationship to you?</td>
</tr>
<tr>
<td>Continuity</td>
<td>How long have you known each?</td>
</tr>
<tr>
<td>Community</td>
<td>Do you have a place you have gone weekly or nearly weekly since the baby has been born (i.e., church, softball games on Monday evenings)?</td>
</tr>
<tr>
<td></td>
<td>How many days out of the week did you get out (leave the premises either with or without the baby) each week during the first month after you came home? During the second month? During the third month?</td>
</tr>
<tr>
<td></td>
<td>Are you active in a church or any clubs or organizations?</td>
</tr>
<tr>
<td>Rituals</td>
<td>Which of the following newbaby customs and rituals did you participate in?</td>
</tr>
<tr>
<td></td>
<td>1. Educated childbirth</td>
</tr>
<tr>
<td></td>
<td>2. Husband in delivery room during birth</td>
</tr>
<tr>
<td></td>
<td>3. At least 20 minutes to hold the baby immediately after birth</td>
</tr>
<tr>
<td></td>
<td>4. Baptism or christening</td>
</tr>
<tr>
<td></td>
<td>5. A baptism, christening, naming or other party in the baby's honor</td>
</tr>
<tr>
<td></td>
<td>6. Godparents</td>
</tr>
<tr>
<td></td>
<td>7. Shower</td>
</tr>
<tr>
<td></td>
<td>8. Flowers in the hospital</td>
</tr>
<tr>
<td></td>
<td>9. Birth announcements</td>
</tr>
<tr>
<td></td>
<td>10. Baby gifts (other than shower)</td>
</tr>
</tbody>
</table>
11. LeLeche League
12. Someone stayed with in first week after baby's birth
13. Read books/magazines on baby care
APPENDIX F.

PERCEPTIONS OF MOTHERHOOD QUESTIONNAIRE
As you know, there is a period of adjustment involved in becoming a mother and new mothers generally have mixed feelings about that adjustment. For the questions that follow, I am interested in your feelings about yourself vis a vis motherhood. There are no right answers. Also, feelings probably do change somewhat over time, however I am interested in your feelings right now. Circle 9 if you feel very much of the quality asked about and 1 if you feel very little.

1. There is much to learn with a new baby, and most of us take a while to feel settled in the role. How settled do you feel in your new role?
   - Not at all
   - Completely

2. How easy or difficult do you believe your baby has been?
   - Extremely difficult
   - Extremely easy

3. How easy or difficult do you believe your adjustment to parenthood has been?
   - Extremely difficult
   - Extremely easy

4. How easy or difficult was particularly the first month?
   - Extremely difficult
   - Extremely easy

5. How much depression have you experienced?
   - None
   - A great deal

6. Most people would agree that the cues (signals as to what the baby needs) of some babies can be understood more readily than those of others. How sure are you about what your baby's cues and signals mean?
   - Never sure
   - Always sure

7. How sure are you that you are making the right decisions in care of the infant?
   - Never sure
   - Always sure

8. In general how good are you feeling about yourself as a mother now?
   - Not good at all
   - Extremely good

9. How good do you feel about your relationship with your child?
   - Not good at all
   - Extremely good

10. How enjoyable is time spent with the baby?
    - Rarely enjoyable
    - Nearly always enjoyable

11. How isolated do you feel as a mother?
    - Very
    - Not at all isolated

12. Do you think you'll look back on this period as a frustrating or rewarding time?
    - Frustrating
    - Rewarding time
APPENDIX G. OBSERVATION ITEMS FROM THE HOME OBSERVATION FOR MEASUREMENT OF THE ENVIRONMENT

Yes No 1. Mother spontaneously vocalizes to child at least twice during visit.
2. Mother responds to child's vocalizations with a vocal or verbal response.
3. Mother tells the child the name of some object during the visit or says the name of a person or object in a "teaching style."
4. Mother's speech is distinct, clear and audible to interviewer.
5. Mother initiates verbal interchanges with the observer--asks questions, makes spontaneous comments.
6. Mother expresses ideas freely and easily and uses statements of appropriate length for conversation (e.g., gives more than brief answers).
7. Mother spontaneously praises child's qualities or behavior twice during the visit.
8. When speaking of or to her child, mother's voice conveys positive feeling.
9. Mother caresses or kisses child at least once during the visit.
10. Mother shows some positive emotional response to praise of child offered by visitor.
APPENDIX H. COMMUNICATIVE BEHAVIOR FROM THE KARGER SYNCHRONY ANALYSIS FOR ANALYZING VIDEOTAPES OF INFANT-MOTHER INTERACTIONS

A. Infant Communicative Behaviors

- roots, opens mouth
- refuses nipple
- rejects nipple
- milk dribbles
- regurgitates
- burps
- opens eyes
- looks at mother
- grimaces
- yawns
- roots, opens mouth
- smiles
- whimpers
- cries
- sneezes
- makes sucking noises
- other vocalizations
- babbles, coos
- hand, finger in mouth
- touches mouth
- rejects pacifier
- accepts pacifier
- startles
- begins gross movements
- lays head on mother's shoulder
- trembles
- swipes, hits
- turns head
- begins fine movements
- grasps, touches
- pulls nipple in

B. Mother Communicative Behaviors

- stimulates I to suck
- pulls nipple out slightly
- inserts nipple
- removes nipple
- juggles, rotates bottle
- fetches spoonful of food
- shifts position
- restrains I's hand
- pushes I's hand from mouth
- pats, rubs
- nuzzles
- inspects, grooms with hand
- tactually stimulates body parts
- grooms with object
- tactile play
- kisses
- elicits grasp reflex
- rocks, close contact
- rocks, no close contact
- presents face
- presents object
- visual play
- makes noise
- places I's hand on object
- places object in I's hands
- removes I's hands from object
- changes diaper
- changes clothes
- checks diaper
- arranges blanket, bib, clothes
- wipes I's mouth
- offers pacifier
- removes pacifier
- makes faces
- smiles
- directive command
- social expressive vocalization
- imitates I's vocalization
- praises
- reprimands
APPENDIX I. CRITERIA FOR CLASSIFYING MOTHERS AS HIGH OR LOW FOR EACH NETWORK SUPPORT

<table>
<thead>
<tr>
<th>Size</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>5 or more support persons</td>
<td>4 (sample median) or fewer support persons</td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Access</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>1.1 (sample median) network contact/day (Frequency A)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>At least one person mother sees 3 times or more/week (Frequency B)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Who is either a relative or mother-friend (Similarity)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Who she has known for at least 2 years (Continuity)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Who lives in town (Proximity)</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>Not high</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dyadic Relations</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>5 or more of the following:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 (of 9) or more on adequacy of support (Intensity)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 (of 9) or more on most people support (Directedness A)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 (of 9) or more on husband support (Directedness B)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 (of 9) on amount of support (Content A)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 (sample median) or more (of 12 items) with score of 7 (of 9) or more of physical support items</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 (sample median) or more (of 12 items) with score of 7 (of 9) or more of emotional support items</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>Not high</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Community</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>1 or more weekly outings</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 (sample median) times out of the house during the first month</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 (sample median) times out during the second month</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 (sample median) times out during the third month</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 club, organization or church participation</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>Not high</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rituals</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>9 (sample median) or more rituals and customs</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>8 or fewer rituals and customs</td>
<td></td>
</tr>
</tbody>
</table>
**APPENDIX J. CRITERIA FOR CLASSIFYING MOTHERS FOR BACKGROUND VARIABLES**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex:</strong></td>
<td>Girl</td>
</tr>
<tr>
<td></td>
<td>Boy</td>
</tr>
<tr>
<td><strong>Breast vs. Bottle:</strong></td>
<td>Breast feeding</td>
</tr>
<tr>
<td></td>
<td>Bottle feeding</td>
</tr>
<tr>
<td><strong>Age:</strong></td>
<td>High 25</td>
</tr>
<tr>
<td></td>
<td>Low 24</td>
</tr>
<tr>
<td><strong>Education:</strong></td>
<td>High College degree</td>
</tr>
<tr>
<td></td>
<td>Medium Some college or junior college or technical school training</td>
</tr>
<tr>
<td></td>
<td>Low High school or less</td>
</tr>
<tr>
<td><strong>Income:</strong></td>
<td>High $20,000 yearly income</td>
</tr>
<tr>
<td></td>
<td>Medium $15,000 - $20,000 yearly incomes</td>
</tr>
<tr>
<td></td>
<td>Low $15,000 yearly income</td>
</tr>
</tbody>
</table>