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EXPECTATIONS, SELF-ESTEEM, AND CHILDHOOD RECOLLECTION OF INNER CITY HISPANIC MOTHERS OF LOW BIRTHWEIGHT INFANTS

City University of New York PH.D. 1987

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EXPECTATIONS, SELF-ESTEEM, AND CHILDHOOD RECOLLECTION OF INNER CITY HISPANIC MOTHERS OF LOW BIRTHWEIGHT INFANTS.

by

EDNA NAZARIO-VELASCO

A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

1987

This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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Acknowledgements

This piece of work was the product of collaboration. I am grateful for the guidance, support and help of my dissertation committee: Arietta Slade, Cynthia Garcia-Coll, and Louis Gerstman. They were a pleasure to work with.

Dr. John Driscoll from Columbia Presbyterian Babies Hospital facilitated access to the wonderful group of women and their infants who kindly participated in the study. Mrs. McCloud and the nursing staff were most cooperative in the process of data collection. To all, my sincere appreciation.

I'm particularly grateful to Emma R. Diaz-Hernandez for her help and encouragement.

I dedicate my work with pride and joy to the memory of my father Ruben D. Nazario, who always wanted a "doctor" in the family and to my mother Edna Velasco, and her mother Josefa Amelia Garcia, my dear "Abu".

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* English and Spanish Versions Included.

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CHAPTER I

THE PROBLEM

Statement of the Problem

Research findings suggest that fetal malnutrition has definite effects on the behavioral organization of infants (Als, Tronick, Adamson, Brazelton, 1976). Neonatal behavior of both low and high birthweight infants is substantially different from that of full term average birthweight newborns (Als, et al. 1976; Lester, 1979). This difference, as measured by the Neonatal Brazelton Assessment Scale (NBAS) is noticeable even among medically healthy infants (Emory and Walker, 1982).

The present research study explored the relation among infant's birthweight, maternal perception of her infant, maternal self esteem, and maternal recollection of qualitative aspects of her relationship with her own mother, and their effects on the interactional synchrony of the mother infant dyad in a feeding situation.

In the present research Small for Gestational Age (SGA) infants will be studied. These babies offer an opportunity to study instances in which early immature behavioral organization may result in delayed visual alertness and overall atypical responsivity patterns towards the mother or primary caregiver.

Definition of Key Terms

Low birthweight /or Small for Gestational Age (SGA) is the term that describes a child who is the product of an intrauterine growth retardation (IUGR); that is infants who, for a variety of reasons, fail to grow in utero. The criteria for diagnosis are generally: birth weight under the 10th percentile and clinical signs of malnutrition in utero. In this study an SGA infant is operationally defined as an infant of full gestational age (37 to 40 weeks), with an Apgar score of 7 or more and no signs of perinatal problems, whose birthweight was equivalent to 2500 grams or less.

Maternal expectations or perceptions is defined as mothers' descriptions of their infants' expected or perceived behavior, along different dimensions such as: reactivity to stimuli (ex. "When my baby is sleeping and a light is turned on, this disturbs her sleep"), motor control (ex. "I have noticed my baby's skin limbs tremboring or her chin quivering"), ability to track (ex. "When I am face to face with my baby and not talking, she focuses on me and follows when I move my head"), emotional responsivity (ex. "When I try to get my baby's attention, she quickly becomes alert, brightens up and stays responsive to me"), and soothability (ex. "When my baby is fussing, she can confort herself by sucking on

her tongue or hand"). It was operationally defined in this study as mothers' responses to the Newborn Behavior Inventory (Appendix A) and Bates Infant Temperament Scale (Appendix B).

Maternal Self Esteem is conceptually defined as mothers' self confidence in her mothering ability. Factors that comprise a mother's self-confidence in her mothering ability include: maternal caretaking ability, acceptance of the baby, expected relationship with the baby, parental influences, body image, and health after delivery. It was operationally defined in the present study as the mother's response to the Shea and Tronick's (1982) Maternal Self Esteem Inventory (Appendix C).

Maternal Recollection of Childhood Issues is broadly defined as mothers' ability to remember qualitative aspects of their relationship with their own mothers along dimensions of acceptance and independence. Acceptance refers to the extent to which mothers recall their own mothers as having been caring/affectionate vs. rejecting/neglectful/indifferent. Independence refers to the extent to which mothers recall their own mother as having encouraged their sense of self reliance vs. having been overprotective/ infantalizing/ intrusive. In the present study it was operationally defined as mothers' responses to the Mother Subscale of Eptein's (1973) Mother-Father-Peer Scale (Appendix D).

Mother-infant interactional difficulties is defined in this study as both mothers' and infants' difficulties to engage in a feeding situation. Operationally, feeding difficulties are measured by coding specific behaviors (i.e., infant refuses nipple, mother puts bottle down) that are indicative of feeding interruptions using a coding system devised by Garcia-Coll (1984) based on Brown and Bakeman's (1975), Mother-Infant Behavioral Codes (Appendix E).

Hypotheses

The present study proposes to test the following hypotheses:

1. Mothers of Small for Gestational Age (SGA) infants will report more negative expectations of their infants at birth than Mothers of Adequate for Gestational Age (AGA) infants.

2. Mothers of SGA infants will report more negative perceptions of their infants at three months compared to AGA infant mothers.

3. Mothers of SGA infants will report lower maternal self-esteem than AGA infant mothers at birth and at three months.

4. In a feeding situation, SGA infants and their mothers will encounter more feeding difficulties than AGA infants and their mothers at birth and at three months.

5. Mothers who presented more feeding problems were expected to report more negative recollections of their own mothers around issues of acceptance and encouragement of self-reliance (independence).

6. Mothers who presented more feeding problems were expected to report less trust in their mothering abilities.

CHAPTER II

REVIEW OF THE LITERATURE

In this section a review of the pertinent literature on low birthweight and its consequences in terms of behavioral organization will be presented. This will be followed by a brief summary of psychoanalytic thinking. Also a summary of attachment theory as proposed by Bowlby (1969) and Ainsworth (1969; 1973), will be presented as basis for the argument that the SGA infant's behavioral may lead to delay in the process of establishing an interactional sequence that will promote the development of healthy attachment patterns. Literature bearing on the possible conflict between maternal expectations of healthy, responsive newborn behavior and the actual experience with the SGA infant will be explored briefly. Finally, literature review will focus on the relation among birthweight, maternal self-esteem, maternal recollection of their own childhood, and how these factor may relate to the mother-infant interaction during feeding.

Low Birth Weight

Prior to the last two decades the term low birthweight was used interchangeably with prematurity.

In 1975 the journal Pediatrics published a clarifying note indicating that the term prematurity referred to an infant born any time before 37 weeks from the first day of the last menstrual period, while low birth weight referred to an infant whose weight at birth was under 2500 grams regardless of gestational age. The article explained that while there are prematures of low birthweight, there is also a separate category that includes the infants born at date (full gestational age) of low birth weight, or small for gestational age (SGA).

Small for Gestational Age is the term that describes a child who is the product of an intrauterine growth retardation (IUGR). IUGR is the clinical entity used to describe infants who, for a variety of reasons, fail to grow in utero. The criteria for diagnosis are generally: birth weight under the 10th percentile for gestational age and the presence of clinical signs of malnutrition in utero. The incidence of IUGR has been estimated to be approximately 5% of the newborn population. There are multiple etiological causes of IUGR (Oh and Coustan, 1982). Factors such as hypertension, poor nutrition, renal disease, smoking, alcohol ingestion, and heavy work have been associated with IUGR. There are instances, however, in which a

thorough evaluation of the mother and the infant fails to identify the underlying causes of IUGR.

In the category, Small for Gestational Age, weight for age norms have been found to be predictive of specific behavioral characteristics that differentiate the fetally malnourished from the well nourished newborns. The literature provides detailed descriptions of the behavioral organization of SGA. Als, et al. (1976) described SGA babies "as babies of poor muscle tone with very low activity levels, poor hand to mouth coordination, poor defensive reactions, and jerky or cogwheel like movements of the limbs with restrictive arcs and floppy on pull to sit" (p.598). Lester, Garcia-Coll, Varcarcel, Hoffman, and Brazelton (1986) reported similar observations when they described SGA infants as difficult, fragile babies that had few resources of their own with which to cope with the demands of the examination. Both Als and her colleagues (1976), as well as Lester, et al. (1986) reported that SGA infants were less able to process visual and auditory stimuli and were less responsive when alert. SGA infants, according to these authors, tend to give an overall impression of stress. Their facial expressions signal strain, discomfort, and exhaustion; they tend to frown intensely yet cannot muster enough energy either to

go to sleep or begin to cry. Lester et al., (1986), found that these infants show poor quality of alert responsivity, they require more input from the examiner to maintain an alert state, and were less reinforcing.

Theoretical Framework

From psychoanalytic to attachment theories the literature is filled with references to the importance of very early mother-infant interactions. In 1946, Anna Freud related the origins of object relations to need gratification. She stated that at first the infant does not love the mother but cathects the experience of feeding. According to her, an infant who feeds successfully loves the experience of feeding. Although Attachment Theory has questioned need gratification as the main goal of early proximity, Ms. Freud was already highlighting the importance of reciprocity or balance in the mother-infant interaction. In this context, one might assume that the SGA infant's decreased responsiveness and decreased ability to reinforce the mother might present a special challenge. Within Ms. Freud's framework the mother's gratification in satisfying her infant's needs as well as her frustration when she is unable to do so will affect her emotional life and, reciprocally, that of the child.

Benedek (1959) introduced the term emotional symbiosis to describe the reciprocal interaction between mother and child through which the process of introjection-identification creates structural change in each of the participants. She states:

> "the study of the psychodynamic processes of the feminine reproductive function reveals that the drive organization which motivates motherhood and the activities of mothering maintains dynamic communication between mother and the child and leads to changes not only in the infant but in the mother as well. Thus, there are reciprocal ego developments in the infant through the introjection of the good mother=good self, the infant develops confidence. In the mother, through the introjection of the good-thriving infant= good-mother-self, the mother achieves a new integration in her personality" (p. 393).

Benedek was suggesting how a positive or negative balance in the mother-infant relationship is established as a result of a transactional process. The SGA infant with his/her immature behavioral organization and awkward responsive patterns might give the mother enough negative feedback to make her feel less good about herself, which may lead her to become less interested in sustaining a mutual interaction. Mothers, or primary caregivers, are the main providers of a holding environment. They hold their infants with their smiles, hands, voice, and support the infants attempt at controlling themselves, ultimately attending for longer

periods. Winnicott (1960) had already referred to holding as a form of loving or a total environmental provision during the earliest period of development. Although he is not explicit about the origin of the mother-infant tie he talked about the "good enough" mother, highlighting in his description the reciprocity of the relationship.

Attachment Theory provides another useful framework to understand the quality that characterizes mother-infant interaction. Attachment refers to the set of processes that keeps the infant trying to maintain proximity to the mother (Bowlby, 1969). Attachment theory is based on the concept that the affectional tie between the mother and the infant develops from species-specific response patterns preprogrammed to insure caretaking of the infant and, therefore, survival of the species. Within an evolutionary context, mutually maintained proximity between mother and child originally protected the infant from danger (Ainsworth, 1973).

Attachment is a reciprocal relationship that develops gradually over the first year of life and is influenced by psychological variables such as quality, timing, and pacing of mother-infant encounters (Ainsworth, 1969). It is also an interactive process

develops gradually through active contact and proximity seeking behaviors, such as rooting, sucking, grasping and postural adjustments which promote the maintenance of physical contact. Both infant and mother are active participants in initiating and maintaining contact.

Attachment is a biological approach to interpersonal relationships. Infants are born with a relatively stable behavioral system which, through sustaining parental care, serve to reduce risk through a period of immaturity. Absence of contact or distance between mother and infant is one of the conditions which may activate systems of attachment behavior.

Bowlby (1969) characterizes attachment behavior as instinctive but makes the distinction that what is inherited is the capacity or potential to develop a behavioral system. The nature and form of these behavioral systems may differ in some measure according to the specific environment in which development takes place. Bowlby's chief focus is not in the genetic biases which underlie attachment behavior but in the interaction of the infant's attachment behavior and the reciprocal maternal behaviors.

From a psychological point of view the goal of attachment behavior for the attached person is felt security. Attachment behavior involves the development

and maintenance of affectional ties. According to Bowlby internal representations or internal working models of attachment figures grow out of the experience with primary caretakers. Early attachment relationships influences one's sense of the world and significant persons in it, including one's self. Internal working models are the set of conscious and unconscious rules for the organization of information relevant to attachment related experiences, feelings and ideation (Main, Kaplan, and Cassidy, 1985).

However important attachment behavior is to the infant and maternal care behavior is to the mother, mother-infant interaction does not have close physical contact as an inevitable outcome. The predictable outcome is that proximity is maintained within limits reasonably approximating the set goal; there is a dynamic equilibrium between proximity seeking behaviors and behaviors antithetical to proximity.

According to Bowlby there are four main phases in the development of attachment. In the first phase the neonate's behavior shows a predisposition towards tracking the human face, sucking, grasping, babbling and crying which serves as a signaling function by eliciting responses from caretakers. Maternal responsiveness at this stage initiates the interactive part of the

attachment process. The infant in his first few weeks, despite his inability to discriminate one person from the other, behaves in characteristic ways to people. He responds by orienting, tracking with his eyes, grasping, smiling, reaching and by ceasing to cry on hearing a voice or seeing a face. The neonate is equipped with a number of behavioral systems ready to be activated by stimuli falling within a broad range, terminated in the same way. Bowlby suggests that these original biases are manifested through behaviors which resemble fixed action patterns. There is no implication that the infant in this stage has proximity as a set goal even though his behavior has the predictable outcome of maintaining proximity.

Reviews of the literature on visual orientation, head turning, sucking, grasping, clinging, reaching, smiling, babbling and crying, demonstrate initial response biases in the infant's behavior that serve as signals in eliciting responses from human caretakers. Feedback from caretakers serves variously to terminate, increase the likelihood of recurring or restrict the effective stimuli eventually to mother or other very special caretaker figure (Ainsworth,1969.)

The second phase of Bowlby's Attachment Theory is based primarily upon the work of Ainsworth (1969). At

this stage the baby's orientation and signals are more specifically directed towards the mother. Maintenance of proximity to the mother by means of locomotion in conjunction with other signals characterize phase three. At this stage the baby uses the mother as a secure base from which to explore. In the final phase the baby is able to predict his mother's actions and adjust his own to them; the responsibility of maintaining closeness is shared by both partners.

Parental care promotes the reduction of risks during infancy through attachment behaviors. As a result of providing a secure holding environment, the development and maintenance of affectional ties takes place. Attachment relationships are crucial in human development since they influence one's sense of the world and significant persons in it including one's self.

Brazelton's (Brazelton, Koslowski, and Main, 1974) work describes what virtually goes on in the establishment of reciprocity following the theoretical guidelines psychoanalysts had already discussed. He found that different degrees and direction of attention have been observed in two to three week old infants. Infants are active in both shutting off and reaching out for a single stimuli. They achieve control over

their physiological systems and states by an homeostatic regulation of the autonomic system. Infants are no longer seen as unpredictable and chaotic but as being equipped with highly predictable behavioral responses. There are two sources of energy: one from within the infant, the other provided by the environment in the person of the principal caretaker.

There is a feedback loop that allows infants to master each developmental step. Anticipation of feedback generates energy that becomes realized and is available as the step is completed. This freed up energy drives the infant toward the next developmental achievement.

The mother's role is synthesized by Brazelton et al.(1974) in five behavioral interactional categories. Mothers, he says:

-reduce interfering activity

-set the stage

-create an expectation for interaction

-intensifies the infants attention

-and, allow for reciprocity.

There is a difference in the mothers' style which was manifested by the force, tempo, and distance in their approach to achieving a rhythmic interaction. The

interdependence of rhythms, definitely seems to be at the root of their attachments.

Sameroff (1978) applies a transactional model in his attempt to understand the mother infant relationship. Essential features of this organismic view of development are the bidirectional nature of the force regulating development and the dynamic quality of both the infant and the environment. Environmental forces, usually principal caregivers, have an impact on the infant that results in behavioral changes. The process is not unidirectional. It has been well established that infants have definite effects on their caregivers (Bell, 1968; 1974) so it is not only the contribution of the caregiver to the quality of the caregiver-child interaction but also the status of the infant to which the caregiver actively responds. Behavior is not solely a function of reproductive or caretaking causality but it is a function of continuous biological and environmental transactions.

The immature behavioral organization of SGA infants, which makes them unresponsive, fragile and difficult, presents a challenge for the mothers. It may be that SGA infants are less able to give mothers the cues and rewards that they need in order to sustain their interest and maintain a reciprocal interaction. The

fact that SGA infants go from one end of the spectrum to the other, that is from total passivity to heightened reactivity, suggests that the so called synchronicity of the mother-infant dyad proposed by Stern (1974) and Brazelton et al. (1974) may be extremely difficult to attain.

Recent Studies

Very important research on the implications of low birthweight on infant development especially on social interaction has been published recently. Sepkoski, Garcia Coll, and Lester (1982) found support for the cumulative risk concept, which means that risk factors (e.g., gestational age, Ponderal Index (weight by height), maternal age, and number of maternal parturitional and fetal non-optimal conditions) act in concert to affect neonatal behavior. They speculated that factors that stress the central nervous system (CNS) operate synergistically; for example, the effects of one factor serves to potentiate or attenuate the effects of others (Lester, 1979).

Lester, Emory, and Hoffman (1978) found that low birth weight was the best single predictor of attention-orientation difficulties. These data strongly suggested that babies who are of low birth weight for

their gestational age are at risk for developmental deficiencies.

Lester et al., (1986) found that when the differences of growth retarded and normally grown infants were adjusted for the effects of Ponderal Index, group differences were still observed on the orientation cluster which primarily measured attentional performance. They also found that at comparable levels of weight for length, infants who are under weight and under length for age differ from normally grown controls on dimension of behavior related to autonomic function but not along behaviors relating to the quality of alert states. The results suggested that neonatal behavior is related to multiple indices of fetal growth patterns that may indicate early versus late nutritional insult during pregnancy. Infants' behavioral organization will be affected in different ways according to the time of pregnancy when the insult or nutritional deprivation occurred. These authors suggested that the infant's difficulty with the organization of state behavior is the result of nutritional insult in the third trimester.

Research to support independent observations made by Als et al. (1976), Lester et al., (1986) and Zeskind (1980) that the visual motor system of the low birth weight infant does not reach the expected maturity at

three months coincide with those already reported by Stern (1974). The consequence of the delay in visual motor development seems to affect the development of mutual gaze between the mother-infant dyad. Stern emphasized the importance of maturity of the visual attention domain in the development of mutual gaze between the mother-infant pair. Stern believed that the infant's ability to regulate interaction through the control of gaze is a functional adaptation of an intrinsic biological process.

Other studies show that infants of appropriate birth weight are able to self regulate interaction through the control of gaze as early as three months of age (Fantz, 1964; Kagan and Lewis, 1965). The role of mutual gaze in regulating perceptual input cannot be separated from its role regulating internal physiological states particularly arousal and affect (Stechler and Carpenter, 1967; Stechler and Latzs, 1966). Infants have been found to respond, for example, by turning away from stimulus to reduce state of arousal.

If the SGA infants lack these self-regulating skills they will probably be ill equipped for social interaction. Utilizing the SGA as the classifying criteria, Als and her colleagues (1976), and Lester and

Zeskind (1981), found that these infants make poor use of available stimulation; this results in deficient social interaction behaviors.

Additionally, the analysis of cry sounds of Low Ponderal Index (an index that takes into account length x weight) infants show a number of acoustic and temporal deviations including an unusually high pitch when compared with controls (Lester and Zeskind, 1979). Crying is a particularly salient aspect of neonatal behavior. A high cry pitch may be one particularly distinguishing aspect of the cry sound (Ostwald, 1972) which may elicit different perceptions and responses from caregivers (Zeskind, 1980) and thus affect the development of the infant with non-optimal fetal growth patterns.

Goggin, Holmes, Hassenein, and Lansky (1978) found that SGA infants' babbling behavior and motor activity was not significantly different from normal control babies. This finding does not support the expected apathetic behavior of the SGA described elsewhere in the literature. One clear finding of the study, however, was that mother's descriptions of their SGA infants were significantly more negative.

These data are consistent with the finding reported by Als and her colleagues (1976) concerning the

reactions of parents of SGA babies. They reported that parents of SGA infants found their babies difficult to live with, easily overwhelmed, highly reactive with unpredictable eating and sleeping patterns. Parents interpreted the feedback given by SGA babies as "leave me . alone" and tended to blame themselves for the difficulties their infants seemed to be experiencing. Obviously the immature behavioral organization of the SGA infant appears to be experienced by parents as frustrating and unrewarding.

The quality of the SGA mother-infant interactions is of crucial importance since the detrimental effects of nutrition may be maintained or exacerbated in a non-suppotive caregiving environment yet may be ameliorated in a caregiving environment that is supportive of optimal development (Sameroff and Chandler, 1975).

The birth of an unresponsive yet irritable infant may interact with previously existing maternal variables to perpetuate a cycle of non-optimal development (Zeskind and Ramey, 1978; 1981). They found that while the effects of fetal malnourishment on intellectual performance may be detected as early as three months of age, they might be ameliorated in a supportive environment by the 18th month and maintained in an

unsupportive environment at least until three years of age. SGA infants in a nonsupportive environment, who showed poor intellectual development and reduced amount of maternal involvement, showed reliably less positive social behaviors than infants in other groups. Zeskind and Ramey's (1981) study was based on the random assignment of infants of the same race and socioeconomic status (black, low SES) to environments (daycare centers) differing in the quality of support for intellectual development. Home control infants in both average and low birthweight groups showed lower scores in social and intellectual developmental measures than low and average infants attending a daycare program.

Maternal Expectations/Perceptions

Pregnancy and child bearing is associated to such intense emotional reorganization that it has been regarded as a personality crisis in need of resolution (Deutsch, 1945 and Bibring, 1959). There is a great amount of emotional energy that is invested in this process. Rubin (1975) described how a mother goes through stages where the energy is shifted from concern about herself to engaging in fantasies about her forthcoming child. High expectations and thoughts of an ideal child are frequently entertained, at the later stages of the pregnancy. Mothers described their ideal

baby as a responsive, alert, healthy child who will recognize them soon and even smile to them. As a result when they encounter their newborns there is a process of reconciliation between what Klaus and Kennell (1976) have termed "actual" vs. "ideal" baby.

The very early stages of mother-infant interaction consist of primary caretaking. However, after a few weeks a normal infant is expected to open to the world of external stimulation. Normally he/she should become proficient in evoking stimulation in which there is an interest (Bell, 1980). This appears to be a crucial moment for the mother who is anxiously awaiting for the feedback that will give her a sense of being recognized and even accepted by the newborn. Als (1976) has called this first stage of active response to the environment the "coming out period". The SGA infant, with his/her inability to be alert, responsive and give positive feedback, is ill equipped to meet the standards of such high expectations.

The extent to which mothers are able to reconcile their ideal vs. actual perception of their newborn could be expected to affect their degree or ease of confidence in their ability to meet their infants' needs at this stage. Mothers' reactions to infants born at medical risk e.g., prematures, SGA, and LPI are different from

their reactions to infants of expected gestational age or normal weight.

Klaus, Fanaroff and Kennell (1972), found that mothers of children of prematures low birth weight visited them fewer times at the hospital. They also found a positive correlation between number of visits and later mothering difficulties. They noted that three of the infants studied were put up for adoption shortly after birth and one at 14 months. In 1960, Kaplan and Mason suggested that maternal reactions, like fewer visits to the Hospital, evidenced difficult adjustment and unconfirmed expectations.

Broussard (1978) found a positive correlation between the mother's perception and the infant's outcome in a variety of interactional and developmental measures using the Neonatal Perception Inventories (NPI) which were devised to measure the mother's perception of her newborn as compared to her concept of the average infant. Broussard's hypothesis about subsequent emotional development was confirmed. More infants predicted to be at risk at one month of age had emotional disorders at 4 1/2 years than those who were at low risk. During interviews at one month postpartum, mothers' of infants at high risk were noted to have poor

self esteem, viewed support systems as less helpful and lacked confidence in themselves as mothers.

Infant Temperament

The literature presents two distinct views on the issue of infant temperament. First, that it is an individual characteristic of the infant based on psychobiological characteristics: the infant perceives a situation and reacts to it in an individual way. Second, that infant temperament is viewed within the social context, as it affects others, especially primary caretakers. This concept was originated by Thomas, Chess and Birch, (1968) who formulated difficult temperament as a scientific construct. Their goal was to search for a way to describe the behavior of an infant who presented a special challenge to their caregivers and its implication for later behavior disorders.

According to Bates (1982) the caregiver's ability to deal with the demands of an infant presents a challenge since it might produce social interactional patterns that could perpetuate conflict and future psychopathology in the child. Bates (1982) attempted to clarify parently perceived difficultness and how it is defined. He found that primary caregivers regard frequency and intensity of fussiness and crying as the

main characteristic of difficult infants, with a style of adaptation to novelty being relatively independent of difficultness.

Self Esteem

Motherhood is a role intrinsically related to a woman's self esteem. As stated by Freud (1947) and Benedek (1959) a woman who can satisfy her infant's needs feels emotionally gratified and good about herself. Studies in the area of mother-infant interaction emphasize the importance of the mothers' confidence in their ability to provide emotional nurturance and security for their infants. Ricks (1984) stated that the ability and propensity to provide a secure base and haven is a key aspect of parental behavior.

A woman's sense of adequacy as a mother seems to be dependent on the responsiveness of her child. Mothers' reasons for expecting an alert, responsive, healthy child are closely related to their own feelings of well being as mothers. Brazelton and his colleagues (1974) have noted that from early on mothers perceive the slightest sign of irritation on the part of the infant as an intentional rejection. He states that mothers are unwilling or unable to deal with neonatal behavior as meaningless or unintentional, but that instead they

endow the smallest movement with highly personal meaning (Brazelton, et al., 1974).

Shea and Tronick (1982) have defined maternal self-esteem as mothers' feeling of self-confidence in their mothering ability. They reported that mothers whose infants encountered even minor health complications had significantly lower self-esteem when compared to mothers whose infants were healthy as newborns. In turn, mothers who reported having higher self-esteem behaved more positively and more confidently when interacting with their infants. They were more sensitive and responsive to their infants' cues.

Since high self-esteem is highly correlated to sensitive and responsive mothering (Epstein, 1973) lowered self-esteem must result when a woman feels ineffectual in her ability to engage, soothe and communicate with her newborn. A responsive, alert tuned-in infant will make a mother feel good and in turn she will provide the conditions for the infant to grow healthy and secure.

Shea and Tronick (1982) hypothesized that maternal self-esteem would be the psychological pathway mediating a host of factors that affect the quality of a mother's adaptation during the post partum period and in turn affect her infant's functioning. Shea and Tronick found

that the scores on the Maternal Self-Esteem Inventory (MSI) were significantly correlated with theoretically established criteria such as health of the infant and family support. They also found a significant correlation between maternal self-esteem (as measured by this instrument) and maternal behavior in a mother-infant interaction task. That is, mothers who reported having higher self-esteem also behaved more positively and confidently when interacting with their infants.

Mother's Relationship to Own Mother.

Of all possible variables, the caregiver's own childhood history has received the smallest share in the study of effective and ineffective parenting (Morris, 1984). Several factors explain the difficulties in conducting such studies. The researchers must chose between a prospective and a retrospective study. A retrospective study depends on the reconstruction of memories. A number of theorists have questioned the validity of such reconstruction. For example, Piaget's theory of reconstruction of the past takes into consideration the present of the individual and assumes that the recollections are somehow modified by the present experience. A prospective study has a long time span and methodological consistency is affected. Some

researchers have borrowed the concordance methodology used in studies of twins. They have applied this methodological approach to the study of intergenerational transmission of conflict.

Frommer and O'Shea (1973) conducted two of the few systematic studies in England. The findings in both studies suggest that separation from parents in family of origin is related to later parenting problems. In the second study Frommer and O'Shea (1973) divided the groups of infants studied into problematic and not problematic based on mother's perception of major difficulties concerning the infant. They found that 7 of the 20 interview variables differentiated mothers of the two groups of infants. Four of these variables concerned the mother's childhood experiences: 1) parents separated; 2) poor relationship with mother or father; 3) parental quarreling and 4) separation from parents before age 11. The other three variables differentiating the groups were present marital problems, depression and major medical problems of the infant.

Wolkind, Hall, & Pawlby (1977) as cited in Ricks (1985) found that mothers of disrupted families, classified as such if before the age 16 her parents had divorced or separated, one or both parents had died or

if she had spent most of her childhood in residential care, were less likely to engage in close stimulating and contingent interaction with their five months old infants. Mothers of disrupted families spent less time in their babies' room, and even when in close proximity, were less likely to touch, talk or respond to the infants' vocalizations like cry, laugh or play noise.

These few studies have concluded that disruption in family of origin appears to be more predictive of future caretaking behavior on the part of the mother than early separation caused, for example, by the death of a parent. Morris (1984) provides another perspective in this issue. He chose 36 mothers from a greater project involving 267 economically disadvantaged mothers. The group chosen was balanced for having equal numbers of children whose outcomes were rated as effective or ineffective in a graded series of problem solving tasks at two years of age. These tasks consisted in assessing the child's ability to organize affect, cognition, and behavior in tool using tasks ranging from easy to impossible. Also they looked at the child's ability to work independently when appropriate but be flexible when needed. All children had similar attachment classification at 12 and 18 months. Mothers were interviewed when children were two years of age, using a

160 item interview designed to obtain information regarding crises in childhood and the following areas concerning mother's family of origin: marital harmony, relationship to mother, relationship to father, role reversal (spousification of subject), and home milieu. Morris found that the number and type of crisis in the mother's history, including loss and disruption in the family of origin, was not solely predictive of child's outcome. His findings suggest that in the presence of crisis, the mother's perception of how well she can handle the crisis, and the quality of her relationship to her own mother was much more predictive of her own child's outcome.

Ricks and Noyes (1984) using Ainsworth Strange Situation Procedure compared groups of mothers (28 mother-infant pairs) of securely and insecurely attached infants. Mother's self-esteem was assessed using O'Brien & Epstein's Self Report Inventory (1981). Also Epstein's Mother Father Peer Scale, that taps on mother's recollection of childhood attachment relationships was administered. They found that the mothers of infants seen as secure in their relationship to them had both higher self esteem scores and reported more positive recollections of childhood relationships with their mothers, father and peers.

Feeding: An interactional situation

Mother-infant studies suggest that feeding is one of the most intense interactional situations. Feeding is the interactional situation we observed in the present research, since it is an activity often practiced by mothers with a clearly defined goal. It is well structured so external influences on the interaction are minimal.

Feeding represents a particular stress for mothers concerned with the physical growth and well being, specially of the SGA infant. As has been suggested by Gárcia-Coll (1983), SGA infants score poorly along dimensions that might be essential for optimal caregiver interaction. This is an important fact since other studies have shown a relationship between neonatal behavior and mother infant interaction during feeding (Osofsky, 1976; Field, 1979).

Feeding is also a very intense emotional interactional activity. The mother is giving of herself, providing nourishment of two kinds: physical and emotional. If the interactional system is disrupted for lack of synchronicity between the mother and infant pair, feeding difficulties might occur. Early patterns of mother-infant interactions are predictive of weight gain during the first month of life (Pollit, Gilmore,

and Varcarcel, 1978). These authors show that early transactional relationships are related to the child's later physical development.

Food intake partly depends on environmental circumstances that become influential at the beginning of postnatal life and contribute to the regulation of the organism growth velocity. The infant is not a passive recipient but an active participant whose behavior controls the volume of intake. For example, Pollit, et al., (1978), found that there was a significant negative relationship between the number of times the infant refused the nipple in the feeding situation and weight gain. Their results suggest that the problem of infants with poor sucking ability may be compounded by the mother's impatient response when feeding. They noted for instance, that the children of mothers who change to a non-feeding activity when they were having sucking difficulties (i.e., cleaning them) were poor weight gainers.

Preliminary analysis of feeding interactions between SGA infants and teenage mothers suggest that both mother's and infant's behavioral characteristics contribute to establish feeding difficulties which might exacerbate the initial growth deficit observed in these infants. The less optimal growth patterns displayed by

SGA infants seem to be the result of non-optimal interaction between infant and mother during feeding (Garcia-Coll, Sepkoski, Lester, 1982).

SGA infants are more difficult to engage in a feeding process. Their inability to be alert and responsive to the mother's provision of physical nurturance might make mothers feel rejected. If mothers bring unrealistic expectations, poor self esteem and a negative recollection of their own childhood experience they might find it more difficult to tune in and provide the basic supportive and compensating environment that would facilitate the infant's organization during the feeding process.

CHAPTER III

METHOD AND DESIGN

Participants

The present sample consists of Hispanic Women who gave birth at Columbia Presbyterian Medical Center. Twenty women were recruited into each of the experimental and control groups (N=40). Hispanic women were defined as women of Hispanic descent, first and second generation. First generation women were those born in a Latin country who migrated to the United States after the first ten formative years. Second generation were those whose parents were born in a Latin country. These women may have been born in the United States but have lived most of their lives in a Latin neighborhood. A Socio-Demographic Questionnaire was administered for the purpose of obtaining this information (See Appendix F).

Table 1 presents the sociodemographic characteristics of mothers by groups. The control group consisted of Appropriate for Gestation Age (AGA) defined as babies of full gestational age whose weights fall between the 10th and 90th percentile of the intrauterine growth curves, more than 2500 grams and less than 3700 according to Lubchenco, Hansman and Boyd, (1966).

Table 1
Maternal Sociodemographic Characteristics

	SGA		AGA	
	X	SD	X	SD
Age of Mother at Pregnancy	21.28	3.03	23.17	4.52
Years in U.S.	13.22	4.98	13.33	6.33
	(f)		(f)	
Living with Extended Family	6		4	
Living with Grandma	4		2	
Education				
Under 7th grade	0		1	
8-9	3		3	
10-11	4		9	
12	5		2	
Some College	6		3	
Occupation				
Homemaker	10		13	
Student	7		2	
Employed	1		3	
Place of Birth for Mother				
-Dominican Republic	9		7	
-New York	7		6	
-Puerto Rico	1		4	
-Cuba	1		0	
-Colombia	0		1	
Language Preference				
-Spanish	8		11	
-English	10		7	
Home Situation				
-Alone	1		7	
-Coupled	7		5	

These infants in addition had an APGAR score of 7 or more, and no perinatal problems like hypoglicemia, jaundice, asphyxia, etc. Table 2 presents infant characteristics by group.

Table 2
Infant Characteristics By Group

	SGA		AGA	
Sex	F= 10	M= 8	F= 8	M= 10
	X	SD	X	SD
Mean Weight (grams)	2330	261.	3260	438.
Length (cm.)	45.67	1.36	50.52	1.49
Head Circum.(cm.)	32.39	.92	34.11	1.13
Gestational Age (weeks)	38.28	1.23	39.17	1.15

The mothers in the experimental group gave birth to babies of full gestational age (37 to 40 weeks) who presented atypical growth patterns as evidenced by a low birthweight measure that was equivalent to 2550 grams or less. The infants' birthweight in the control group ranged from 2620 grams to 3920 grams; in the experimental group from 1910 to 2550 grams.

Eighteen women in each of the groups (N=36) completed the study. Two of the control group members were lost when they moved away from the city of New York, and thus could not be interviewed at follow-up time. Both of these women had first born, baby boys.

Two experimental group participants did not complete the study. One of the infants was placed under child care protective services in a foster home since the mother was a cocaine addict with no permanent domicile. The infant was a third born baby boy. The other woman, who at the time of delivery lived with her husband's extended family, moved away from them and left no address. Several attempts to contact her at follow up failed. Her infant was a first born baby girl.

The participating mothers were in the range of 18 to 30, with a mean age of twenty one and were selected from the clinic patient population at Columbia-Presbyterian Medical Center. They all earned less than $10,000 a year.

Instruments

Maternal Expectations of Infants at Birth: To assess the mother's perception of her infant, a modified version of the Newborn Behavior Inventory (NBI) was administered. The NBI is a method for assessing parental perceptions of infants. It was developed by Barbara Anderson and Kay Standley at the National Institute of Child and Human Development in Maryland. The NBI draws on the behavioral dimensions of the Neonatal Behavior Assessment Scale (NBAS) (Brazelton, 1973) which is a useful measure for obtaining clinical

and research information on the interactive behaviors of newborns. Correspondence between the NBI and the NBAS has been established by trained NBAS examiners who scored the NBAS and also completed the NBI on healthy infants from 7 to 10 days of age. Each item of the NBI was correlated with the item of the NBAS which it was designated to match (except for the pinprick and defensive movement items). Twenty of twenty four correlations performed reached statistical significance, most beyond the .001 level. In this study, the NBI was used as a measure of maternal expectations since it was administered right after birth. (Appendix A).

The mothers were given a series of 24 cards on which there were statements about infant behavior, e. g., "My baby seems to smile a great deal now". The NBI drew on the Q-sort methodology of the Perception of Baby temperament. The mothers were asked to sort the cards into three response categories: 1. the majority of babies; 2. some babies; 3. few babies. The NBI score obtained was equal to the frequency with which mothers chose the first category: majority of babies. This was agreed to be a measure of high expectations.

Infant's temperament at 3 months: To assess the mother's perception of her infant's temperament at 3

months, The Bates Infant Temperament Scale (Bates, 1982) was administered. This scale was developed by Bates at the University of Indiana (revised 8/30/77). It consists of 24 items that are descriptive of infant behavior to be rated by mothers on a 1 to 7 Likert scale: 1 representing very easy to 7 representing very difficult. The Bates scales are composed of four factors: (1) Fussy-Difficult, (2) Unadaptable, (3) Dull, and (4) Unpredictable. To obtain the overall score, the scores on the discriminating items for a given factor were summed. (See Appendix B)

Maternal Self-Esteem: The Shea and Tronick Maternal Self-Esteem Inventory (Revised) (1982) was used to measure maternal self-esteem defined as a mother's feeling of self-confidence in her mothering ability. This inventory was developed by E. Tronick and M. Shea at the University of Massachussetts at Amherst.

Tentative evidence of the validity of this scale is given by Shea's and Tronick's findings that score on the Maternal Self-Esteem Inventory were significantly correlated with theoretically established criteria such as health of the infant and family support (Shea and Tronick, 1982). They also found a significant correlation between maternal self-esteem as measured by the instrument and maternal behavior in a mother-infant

interaction task. That is, mothers who reported having higher self-esteem also behaved more positively and confidently when interacting with their infants. This inventory consists of 26 items to be rated on a 1 to 5 Likert scale that ranges from completely true to completely false. To obtain a Maternal Self-Esteem score the responses were summed adjusting values for negative statements. The higher the score the higher the maternal self-esteem of the subject (Appendix C).

Mother Infant Interaction During Feeding.

The Feeding Coding System measures feeding difficulties by coding specific behaviors that are indicative of feeding interruptions. It was devised by Garcia-Coll (1984) and its items are derived primarily from Brown and Bakeman's Mother-Infant Behavior Codes. Garcia-Coll (1984) adopted both infant and maternal behaviors and their definitions, focusing on those behaviors that are indicative of feeding difficulties, i.e., infant refuses the nipple: infants keeps lips and/or gums tightly closed to each discrete presentation of the nipple and/or turns his/her head from the stimulating object.

During a 15 minute period the frequency of the behaviors described in this Coding System was coded. This system has been proven to be simple,

straightforward method of operationalizing feeding difficulties. Before starting the study, the Principal Investigator established reliability with another observer for the total number of feeding interruptions observed to a criteria of 85% agreement . (Appendix E)

Mother's recollection of her childhood relationship with her own mother was assessed with the Maternal Scale of the Epstein Mother-Father-Peer Scale (MFP) (1983). This scale was developed by Seymour Epstein at the University of Massachussetts at Amherst. The MFP is a self-report measure that assess a person's recollection of his or her parents along two important dimensions: Acceptance (acceptance vs. rejection) and Protection (encouragement of self-reliance vs. overprotection). The Maternal Scale attempts to tap on a person's judgment of their mother's behavior and attitude toward them in childhood. Such a judgment is the result of innumerable mother-child interaction experiences over a long period of time, and may be thought of as an expression of the adult's internal working model (Bowlby,1960) of a primary attachment figure.

The MFP consists of 23 items. Respondents are required to rate statements on a 5 point scale: a score of 1 representing "strongly disagree with statement", and a 5 representing "strongly agree with statement".

Two separate scales for Acceptance (13 items) and Protection (10 items) are obtained (Appendix D).

Procedure

A research assistant from the Columbia Presbyterian Medical Center selected the sample for the study to insure that the Principal Investigator was blind to group membership.

The Principal Investigator visited mothers shortly after birth to explain the general purpose of the study and ask for their participation. A consent form in accordance with the procedures of the Ethics Committee of Columbia Presbyterian Hospital was given to each of the participants in the study (Appendix G). Mothers were assured that all the information would be confidential. No names identified forms or questionnaires. Materials were coded for research purposes. All the instruments used in this study were translated into Spanish and administered in Spanish if mothers preferred it to the English version.

At the time of the first visit, mothers were asked to choose a later time to meet with the Principal Investigator before discharge from the hospital. Mothers were asked to choose a time that would coincide with a regular feeding schedule. At this time: The Newborn Behavior Inventory was administered, as well as

The Tronick and Shea Maternal Self Esteem Inventory, and The Epstein Mother-Father Peers Scale (Mother Subscale). A 15 minute feeding interaction was observed and coded using the coding system devised by Garcia Coll (1984).

The Principal Investigator scheduled a follow up visit for three months later. Mothers were told to expect a phone call to remind them of this date. The second visit took place at the mother's home to insure a high rate of participation and a more comfortable setting for mothers. The approximate date for the appointment was set up but the exact time was discussed at the time of the phone contact. Since at the second visit another feeding interaction was to be observed, we wanted to make sure that the appointments coincided with their regular feeding times.

At the time of the second visit at 3 months mothers' perception of their infants' temperament were assessed using Bates' Infant Temperament Scale; and maternal self-esteem was assessed with the Shea and Tronick Maternal Self-Esteem Inventory. The researcher observed and scored another 15 minute feeding interaction using Garcia-Coll's Feeding Coding System. In addition, a behavioral ckecklist developed by Levin, Garcia Coll, and Oh (1985) was used to obtain record clinical observations. (Appendix H).

This checklist consisted of items that tap on maternal and infant interactive behaviors that are suggestive of feeding problems at three months. Examples of feeding problems at three months included items such as : looks frustrated and turns away (mother) and drowsy and pushes away (infant).

CHAPTER IV

RESULTS

Data Reduction

In order to compare the group of mothers of low birthweight infants (SGA) and mothers of infants of normal birthweight (AGA), means and standard deviations were calculated for all demographic variables. Also mean scores and standard deviations were calculated for each of the following instruments: Newborn Behavior Inventory (NBI), Bates Temperament Scales (Bates), Shea and Tronick Maternal Self-Esteem Inventory (MSI), Mother-Father-Peer Scale (MFP, mother sub-scale) and Feeding Difficulties Coding System.

In comparing the groups of SGA and AGA mothers, a significant relation between birthweight and gestational age (r= .36; p< .02) and birthweight and mother's level of education (r= .27; p< .05) were noted. The SGA group had an average gestational age of 38.28 (SD= 1.23) while the AGA group had an average gestational age of 39.17 (1.15) weeks. Also, mothers of SGA infants tended to be less formally educated than those of AGA infants. Gestational age and education were used as covariates since groups differed significantly. Analysis of Covariance was then used to determine the effects of low

birthweight on maternal expectations, maternal self-esteem, and feeding problems. The effects of low birth weight on feeding difficulties and maternal self esteem at two time points was analyzed using ANCOVA for repeated measures. Finally, correlational analyses were used to assess the relationship between feeding problems and maternal recollection of their relationship with their own mothers on issues of acceptance and independence.

Maternal Expectation/Perceptions

Hypothesis 1: Mothers of Small for Gestational Age (SGA) infants will report more negative expectations of their infants at birth than mothers of Adequate for Gestational Age (AGA) infants.

Mothers' expectations of their infants at birth were measured by using the NBI. SGA mothers obtained an average score of 16.17 (SD=5.10) and AGA mothers had a mean of 13.00 (SD=4.37). Although this difference failed to reach statistical significance ($F(3,32) = 2.347$: $p < .09$) a trend in the opposite direction than hypothesized was noted. Contrary to predictions there was a trend at birth for mothers of SGA to have higher expectations of their infants.

Hypothesis 2: Mothers of SGA infants will report more negative perceptions of their infants at three months compared to AGA infant mothers.

Hypothesis 2 was supported by our findings. Mothers' perception of their infants at three months were measured by using the Bates scales which yield four factors: Unadaptability, Dullness, Unpredictability and Fussiness. ANCOVA comparisons indicate that there were no significant differences between these two groups in their judgment of their infants' unadaptability. However, results did indicate that mothers of SGA infants obtained scores on the Dullness, Unpredictability and Fussiness factors that were significantly higher than those obtained by AGA mothers. (See Table 3).

Table 3

Means, Standard Deviations and Analysis of Covariance Comparing Mothers of AGA and SGA Infants on the Bates Scales

BATES SCALES	MEANS	S.D.	F
Unadaptability			
SGA	13.22	5.27	3.33
AGA	11.44	4.03	
Dullness			
SGA	6.67	3.20	6.56*
AGA	4.00	2.65	
Unpredictability			
SGA	9.44	3.76	4.18**
AGA	6.72	2.45	
Fussiness			
SGA	22.89	8.32	4.32**
AGA	17.39	1.41	

*$p<.02$

**$p<.05$

Maternal Self Esteem

Hypothesis 3: Mothers of SGA infants will report lower maternal self esteem than mothers of AGA infants at three months.

Maternal self esteem was measured one day after birth and at three months using the Shea and Tronick Maternal Self Esteem Inventory (MSI).

An analysis of covariance with repeated measures was used to determine if there were significant differences in pattern between the two groups of mothers at the two time periods. See Table 4 for Means, Standard Deviations and the results of ANCOVA

Table 4

Means, Standard Deviations and Analysis of Covariance Comparing Mothers of SGA and AGA Infants on Maternal Self-Esteem

Time	Group	Means	SD
Birth	SGA	11.50	10.83
	AGA	16.72	13.99
3 Months	SGA	12.83	12.09
	AGA	20.72	9.85

Results of the ANCOVA indicate that there were no significant differences between the two groups of mothers on maternal self-esteem. ($F(1,35) = 2.03$). The data, however, show a significant trend for SGA infant mothers

to have lower self esteem than AGA infant mothers ($F(1,35)= 2.70$; $p< .06$). Although there were no significant differences ($F(1,35) = 2.89$) between the scores at birth or at 3 months for both groups, there is a significant trend towards an increase in maternal self esteem by the mothers of AGA infants at 3 months, while mothers of SGA infants remained the same ($F(1,35)= 2.47$; $p< .07$).

When the interaction between time period and birthweight groups were examined, no significant differences were found for the mothers of SGA infants and mothers of AGA infants at the two time periods. ($F(1,35) = .09$).

Feeding Difficulties

Hypothesis 4: In a feeding situation, SGA infants and their mothers will encounter more feeding difficulties than AGA infants and their mothers at birth and at three months.

Feeding problems were assessed using The Garcia-Coll Feeding Coding System at birth and 3 months.

Results of ANCOVA indicate that there are significant differences between the two groups of mothers on feeding difficulties. Mothers of SGA infants had significantly more feeding problems at birth and at three months than mothers of AGA infants ($F(1,35)= 13.36$; $p<.001$)(Table 5).

Table 5

Means and Standard Deviations of Mothers of AGA and SGA on Feeding Problems at Birth and at Three Months.

Time	Group	Means	SD
Birth	SGA	8.06	5.00
	AGA	3.11	2.42
3 Months	SGA	9.11	5.67
	AGA	3.56	5.27

When the interaction between time period and birthweight was examined, no significant differences were found between mothers of SGA infants and mothers of AGA infants at the two time periods. Feeding difficulties presented by both groups of mothers seem to follow the same pattern at both time periods. See Table 5 for means, standard deviations and significance levels

A repeated measures ANCOVA was used to determine if there were significant differences on feeding difficulties between the two groups of infants at the two time periods. SGA infants had significantly more feeding problems than AGA infants at both time periods ($F(1,35)= 13.35$; $p<.00$) (Table 6).

When the interaction between time period and birthweight groups was examined no significant differences were found between SGA and AGA infants. Feeding problems presented by the two groups of infants seemed to follow the same pattern at both time periods.

Table 6

Means and Standard Deviation for AGA and SGA Infants on Feeding Difficulties at Birth and Three Months

Time	Group	Means	SD
Birth	SGA	9.28	6.2
	AGA	5.56	5.3
3 Months	SGA	11.44	5.Ø
	AGA	3.89	4.1

Hypothesis 5: Mothers who presented more feeding problems were expected to report more negative recollections of how their own mothers accepted them and encouraged their independence.

Mother's recollection of their experience with their own mothers were measured with the Mother-Father-Peer Scale (MFP). The means and standard deviations obtained in this study, for both mothers of SGA and AGA infants tend to be generally consistent with the norms reported by Epstein (1983) for females (Independence: M= 47.45; SD= 1Ø.58; Acceptance: M= 4Ø.4Ø; SD=9.39). See Table 7.

Pearson Product Moment correlations were calculated in order to describe the relationship between mothers' feeding problems and mothers' recollection of how their own mothers accepted them and encouraged their independence. Significant correlations were found between the MFP Independence subscale and the mothers' scores on the Feeding Coding System at three months

(r=.4026; p<.05). This suggests that mothers who had more feeding difficulties reported having had mothers who they recalled as having promoted a greater degree of independence.

Table 7

Means and Standard Deviations for Mothers on the Mother Scale of the M-F-P

Subscale	Groups	Mean	SD
Acceptance	SGA	39.94	8.63
	AGA	43.65	5.09
Independence	SGA	40.06	7.23
	AGA	39.88	8.77

When these patterns were examined in each of the two groups, the correlation between the MFP Independence and feeding behavior was not significant in the AGA group (r= -.33; p<.11). In fact the trend was in the opposite direction. That is, AGA mothers who had more feeding problems recalled their mothers as having been less encouraging of their self reliance. When the scores of SGA mothers were examined the correlations between feeding problems and their score on the MFP Independence subscale was significant (r= .51; p<.05). Mothers of SGA infants who had feeding problems also tended to have higher scores on the MFP Independence subscale.

When the relationship between the MFP Acceptance scale and feeding problems was examined, no significant correlation was found for either AGA or SGA mothers (AGA: r= .19; SGA: r=-.10). Results suggests that there is no relationship between mother's feeding difficulties and their recollection of their own mother's acceptance. Therefore the fifth hypothesis was not confirmed.

Hypothesis 6: Mothers who presented more feeding problems were expected to report less trust in their mothering abilities.

When maternal self esteem scores for both groups were compared, mothers of SGA infants showed a tendency to have lower maternal self esteem than mothers of AGA infants. See Table 3 for Means and Standard Deviations.

Pearson Product Moment Correlation were calculated in order to examine the relationship between mothers feeding difficulties and their self-esteem. The correlation of -.50 ($p<.01$) suggests that mothers who had more feeding problems had lower maternal self esteem. When AGA and SGA mothers were compared there was no significant relation found between feeding difficulties and self esteem for the AGA mothers ($r=-.26$) while SGA infant mothers showed a significant relationship ($r=-.53$; $p<.05$). Overall there was a tendency for mothers with feeding problems to

have a lower self-esteem and this was particularly true for SGA mothers. Therefore, the sixth hypothesis was supported.

CHAPTER V

Mothers and Infants: Descriptive Analyses

One of the most interesting aspects of the study was the range of differences and similarities that the sample of mothers presented even within groups. I will attempt to describe them by grouping the mothers in broad descriptive categories flexible enough to give the reader a sense of the mother infant pairs in our study.

Our sample, collected in a Hispanic neighborhood of New York City, contains mostly second generation women of Puerto Rican descent and first generation immigrants from the Dominican Republic. The women of Puerto Rican descent mostly lived within or close by an extended family network. Their families have lived in New York for approximately 20 to 30 years, all of them belong to the low socio economic class and most likely came to the United States with the great Puerto Rican hard labor migration of the 1940's. The majority of this sub-group lives in the Bronx. The group of mothers from the Dominican Republic belong to a migration that has taken place in the last 15 years. They live within extended family networks as well. This community has spread over the Washington Heights area bringing with it a dramatic change, the Latin influence. They have opened

businesses that range from "bodegas" (food markets) to clothing shops and dancing halls. Although they confront the problems of the most recent migration group in New York City they seem to be quickly climbing the social and economic ladder.

There is a balanced number of both cultural sub-divisions in our sample suggesting that regardless of their specific group affiliation both Puerto Rican and Dominican mothers are similar in the strength and vulnerability towards the social pressures they presently confront. Latins are an economic and cultural minority group that struggles with great effort to participate in the power process of New York City.

The physical environments of the majority of mothers in our control group reflected a certain organization. Most of them have a support system provided by a husband, steady boyfriend, and/or an extended family. There were some exceptions, i.e. a low birthweight infant whose mother was very small and had been of low birthweight herself. In this case SGA was a single negative stressor in an otherwise organized, balanced environment.

The SGA or experimental group for the most part presented a more impoverished social picture. Home environments were more disorganized in general terms. Emotional tension was perceived from the social

interaction of the family. As already reported, complications, mostly occured in the SGA group revealing a myriad of stressors that included: high blood pressure, emotional problems (i.e. depression), smoking, alcohol, and drugs. In fact, extreme cases, 4 out of 18, in the SGA group suffered drug addiction, which constituted a chronic stressor. These women were very difficult to schedule, it took more than four attempts to schedule them at follow up. They were very resistant to receive a stranger in their homes although they were reassured that the researcher did not represent any other social agency.

These mothers were anxious women, who lacked control over their lives; they were overwhelmed by issues of daily living especially the demands of caretaking. They had no positive feedback to offer, their outlook in life was grim, they were less friendly and spontaneous, more difficult to engage, less cooperative and made me feel less welcomed. They were unable to relax and share informal comments. They felt more exposed and guarded. They almost couldn't wait until the interview was over!

There was a group of mothers in the SGA group whose environments were more physically organized. Still they were reacting to stressful life events that occurred before or during pregnancy. One of the most significant

was marital problems or separations. These separations produced symptoms of depression, anxiety, and instability. These mothers were less avoidant and relatively better organized than the extreme cases. They ranged in their attitudes from responsive with some difficulty i.e. a woman who after being friendly and responsive was not at home at the scheduled time to resistant or depressed.

By contrast, mothers who did not exhibit feeding problems regarded mothering as a positive aspect of their lives. They talked about their infants with joy, they were positive in their descriptions, they were surprised and marveled at their progress. They were much more attuned to their infants. Their infants were more alert, they vocalized, smiled more, and were more responsive. They engaged in interaction with mutual delight. It was a dance of sorts, a beautiful interdependence of rhythms. Step by step, mothers provided the holding framework that Winnicott (1960) talks about. They facilitated organization in such a way that you could almost see the progression of steps of the interactive process as described by Brazelton, Koslowski, and Main (1974). They had some questions and complaints yet these were experienced within the context of acceptance and joy.

Mothers showing interactional difficulties during the feeding process were less able to establish a reciprocal interaction with their infants. Even when they were holding and going through the motions of feeding they did not engage in touching, caressing, patting or stroking in my presence. Especially in the extreme cases, mothers were too worried and anxious, perhaps because of the intimacy that our meeting provoked. I was in their real or true environment and thus could experience the quality of their lives, witness them in the context of their social and emotional lives. The following case is an example of a mother of an SGA infant who suffered chronic stressors.

Case Presentation: Maria, three minutes after starting the feeding process, put the infant in the bed, -the bottle held up with the aid of a pillow-, proceeded to watch TV while peeling potatoes for supper. It was 4:30 p.m. This mother was very uncomfortable with my visit. She had already told me on the phone that she couldn't meet for the follow up visit. She wanted to call me at a later time if her life got "less complicated". A following Saturday afternoon I called her back. Although she was ambivalent she agreed to see me if I could come to her house in the Bronx, right away. She waited for me downstairs with her baby. He was so bundled up that I could hardly see his face. I

attempted to engage her in conversation, she was mainly unresponsive, the only thing she said was "Things are bad, my father in law wants us; me, my husband and baby, out of the house." It seemed that drugs were the reason for the problems although she did not say it specifically. She was very distant and avoided trivial conversation as well. She wanted the interview over fast. She answered rapidly. She was cautious, tentative and did not trust me.

Her interaction with her infant was one of total disengagement. She did not engage him or responded to any of his clues. In fact this was the most passive infant in the sample. He did not show any active distress but looked totally unresponsive. He stared blankly and did not engage his mother in any exchange. He did not smile or vocalize, he merely sucked as if he had not had any nourishment for days. There was no interchange between this pair. Mother was very anxious, frightened and in distress. The world around her had begun collapsing even before her pregnancy started. In the first interview at the hospital-although the infant was rather placid-she was already complaining that he did not like his milk and was totally intolerant of his rhythm. At 3 months, it was obvious that her social stressors had taken a toll. She had fairly no controls,

she had lost her center, her own organization. Within this context attunement and mutual delight were virtually impossible. In this case the absence of maternal delight resulted in an inhibited, unreactive, depressed 3 month old infant. In another case, a similarly disorganized, addicted but more angry mother produced a highly reactive baby who cried constantly during feeding. Mother described her infant as extremely difficult, she said "he is driving me crazy."

There was a second, intermediate group of SGA mothers whose life stressors were not so chronic and still presented with feeding/ interactional problems. Some of them were too young and inexperienced, not ready for the demands of the mothering role. Others were depressed or suffered emotional instability as a result of separations, etc. The young mothers had not finished high school, their infants were an obstacle to their youth related desires and activities. They seemed to resent their infants' demands and described the experience as unrewarding. They were overwhelmed by their infants' needs and insecure about their abilities to be good caretakers. To a certain extent they expected their infants to "help them out" to give them only positive feedback. Those with SGA infants were very disappointed. They found them particularly difficult and

unrewarding. The following is an example of a very young mother of an SGA infant.

Case presentation: There was a 17 yr. old mother who lived with her own mother. Although she had a boyfriend, the father of the child (18 yr. old), it was an unstable relationship. Both parents were high school students. On our follow up, 3 month visit at home mother was all dressed up and ready to leave the infant with the grandmother who lived nearby and go out with friends. During the 15 minute feeding observation she wanted the child to hold his own bottle. She reported, "he is a mean baby, when you smile at him, he does not smile back, he doesn't like to be bothered, being with him all day drives me crazy. His father does not like him very much because he cries. He is going away in the summer to Santo Domingo with Grandma, thank God she will baby sit." In the summer he was going to be 6 months old.

Throughout the feeding session the baby looked at the ceiling and completely ignored her. There was no mutual delight. The mother kissed and rubbed him in a detached angry manner. She even pretended to be playing when pulling out the nipple "to bother him".

The mothers who were evidently depressed were removed and passive in their interactional style. There was a certain caring, a basic provision of the "holding

environment" but it lacked excitement. They went through the motions with lack of enthusiasm and joy, therefore, mutual delight did not take place. For example, one subject, a pleasant woman who had social support and lived in a relatively organized environment, was nonetheless very depressed. She was a chain-smoker. She appeared to have little energy available for active interaction. She was sweet but passive in her approach to her infant. This woman had lost a previous child to crib death and had been an abused child for the first thirteen years of her life.

There was still a third sub group of mothers who presented with characterological make-ups that did not facilitate reciprocal rhythmic interaction between the mother-infant pair and therefore presented with feeding problems. Both mothers of SGA and AGA were present in this sub-group. The following is an example of an AGA mother who was unable to be responsive to her infant's needs.

Case Presentation: Dolores was a 21 yr. old woman who was initially giggly and excited, overjoyed with the birth of her infant. She didn't care that his father was very tentatively in the picture "I will give him my name (her last name), we will prevail"! She was totally confident that she would do well. However, while

feeding, her infant was almost hanging from her arms. She was totally unaware or disconnected from the cues that the infant could be providing. She decided when the feeding was over and pulled out the nipple from his mouth. There was a certain pushiness in her attitude and lack of real concern or awareness of her baby's needs. This mother complained that nobody had helped her in the Hospital. She basically wanted to be taken care of, herself.

At three months Dolores stood me up once and was thirty minutes late for the next scheduled visit after I called several time to agree on the best time for her. Her own mother was taking care of the child while she was somewhere in the neighborhood when I arrived. Grandmother wanted to start the feeding, the infant was obviously hungry. Momentarily mother arrived with food for herself. At the time of the feeding observation she positioned the infant on the couch by her side. She held the bottle with her left hand while feeding herself with the right. As this was going on, she talked to her sister who was in another room. The infant, who was apparently very hungry, was trying to suck but it was so uncomfortable that the nipple slid out and milk ran down his chin. He threw up twice.

Overall this infant was passive, floppy and ignored mother throughout the feeding process. There was no mutual gaze in this mother-infant pair, no real connection or attunement. Although mother talked endlessly about her "wonderful, wonderful baby" the sweet harmonious exchange of a well related pair was not there.

Mothers' recollections of how they related to their own mothers in childhood.

The relationship or continuity patterns between a mother's experience with her own mother and how she feels when confronted with her mothering role is a very important issue. It was striking how in describing their own mothers women in our sample often described themselves. Even in the least problematic of the cases a fairly well related but somewhat detached and guarded woman described her mother as "strict, she was not warm but she was there for me, my siblings used to say that she preferred me, she was a sad woman..."

A very warm, happy mother who was delighted with her mothering experience presented a balanced picture, when she described her mother as "warm, good mother, she would talk and embrace me, she helped me solve my problems and gave me good spankings too!"

The most balanced relationships take into account both the good and bad parts of every experience to try to

find a reasonable equilibrium of cognition and affect. In our sample mother's memories about experiences with their own mother were: (1) idealized but unspecific, (2) forgotten, as mothers couldn't recollect anything and, (3) negative. Mothers who couldn't remember, had the most difficulties in their relationships with their own mothers as evidenced by their defensiveness. Wonderfully positive but unspecific recollections suggested similar defensiveness as already discussed by Main and Goldwyn (1984). Mothers who showed some insight about their primary relationships were able to come to terms with the good and bad aspects of the experience. They were more able to grant forgiveness and develop a certain perspective that helped them have a sense of balance and control.

The following examples illustrate the relation between how two mothers felt about their own mothers (childhood memories) and how they felt and related towards their own infants. Marta was the mother of an AGA infant while Rosa was the mother of an SGA infant.

Case Presentation: Marta, a 17 year old primipara, reported that her mother had been an emotionally unstable woman who had some hospitalization episodes. She described her as a " nervous woman who in her childhood hit her frequently, sometimes with an electric cord." At

some point "she lost her mind and was hospitalized for two months."

During our first visit Marta reported that she was living with her mother. In fact there was a little stuffed animal on the night table that her mother brought for the baby. Marta was happy with her infant. She was breast feeding and presented with relatively no feeding problems. Although she was warm and caring she was somewhat unresponsive of her infant's needs, i.e. after a period of vigorous sucking the infant stopped and mother left the nipple (breast) in, after a long pause the infant resumed his sucking, twice she said enough and patted him for a long, long time.

At three months Marta was living with her boyfriend, the infant's father and his family. Her mother had "thrown her out of the apartment". She reported constant fights over issues of control and "she couldn't take it any more."

Marta talked about her childhood and her feelings with some insight " I was lucky to have my father, he was really good, he used to console me, to this day I go to him for comfort." She was somewhat anxious that she could lose her calmness. "I'm calm with the baby when he cries I count to 10 and take a deep breath. My cousin

told me that it (hitting, loss of control) could happen to me with my baby."

At three months, Marta expresed a certain desire to be a good mother and her affect tended to be positive. However, she was overwhelmed, worried and frightened by her own experience. She was living in a socially unstable environment of which she had no apparent control. She was pregnant again and struggling with the idea of having an abortion.

Obviously Marta's father had provided the basic elements of a secure primary attachment. To a great extent she had internalized that positive affect and was somewhat aware of her feelings and able to relate relatively well. Still she was battling with the issue of lack of control. She verbalized her fear of losing her control with her infant and there was plenty of evidence of her lack of control over her life and what she wanted.

During the feeding session Marta was more interested in talking about her worries as if hoping to get some feedback from the interviewer. She wanted reassurance that an abortion at that time was right, that she couldn't handle two infants. Meanwhile the baby was desperate for food and cried. She positioned him in the stroller and fed him sideways, merely holding the bottle. She picked him up to burp him and playfully

interacted with him. The baby smiled, got overjoyed, and excited. At that moment she distanced him by pushing him away, commenting "now don't get carried away" ("no es pa' tanto!"), implying that the infant was somehow getting "carried away" with his excitement. The ambivalence was dramatic. The remote or distant possibility of punitiveness on her part was reflected in her gestures at that moment.

Rosa was a 19 year old woman who was hard of hearing and used corrective devices. During our first visit at at birth, she looked very insecure. However she had by her side a young supportive boyfriend who was a hard working man. He looked delighted with his child and helped in his handling. During this first feeding session Rosa was tense, hesitant and insecure. She looked at her boyfriend throughout the feeding process as if wanting him to take over. She was obviously uncomfortable and terminated the feeding even while the baby was still sucking.

At three months Rosa was prompt to schedule our meeting and gave me a friendly welcome. She was craving support and reassurance. She asked me "a million questions", she wanted to know how to handle her infant, what to expect and what she was doing the right thing. She was very anxious.

Rosa's boyfriend is a recent immigrant trying to save some money to be able to rent an adequate apartment for Rosa and his son. In the meantime, she lives with her parents and her two sisters. The family is not very fond of him, although he is allowed to visit. In talking about her mother Rosa reported "she was very overprotective and afraid that something bad would happen. She did not let me go anywhere or do anything as if I couldn't. She does not know how to handle my hearing problem. She is not like you. You try, she never tries ...". Rosa described her mother as a rejecting person who avoided her in order not to deal with her hearing impairment. She did not give her any personal/emotional support. She was not close and did not give a her a feeling of being loved and cared for. She was only able to get her special services, i.e., special education and corrective devices. When Rosa got pregnant her mother was very upset "that it had not been my older sister. They are very jealous that I have a boyfriend and now a son". Rosa has a younger sister who helps her with a baby. "My mother hates that she helps me, too", she sadly reported.

Rosa was extremely tired "he wakes me up twice or three times a night. I have been having difficulties going to school. I am half asleep". She was totally

overwhelmed and insecure during the feeding process at follow up. She looked at her infant with a certain joy, mostly marveled/surprised at how fast he was growing. Overall she did not know what to expect. She was uncertain if he could see, worried about it and unable to engage in play or mutual delight. She seemed as if she did not know how to carry the infant, as if she could not handle the demands of the parenting role. Her baby was mostly drowsy and ignored her completely. He was uncomfortable and ended up crying out of control when she was unable to respond to his needs.

Rosa apparently could not give what she did not get. She lacked a secure attachment, a person wiser than her who could comfort, protect and guide her. Although she seemed to be trying to do her best, her insecurity was striking. The continuity of conflict around the mothering experience was astonishing; she felt as her own mother probably did with her: overwhelmed, frightened and insecure.

In conclusion, SGA mother-infant pairs were more highly represented in the socially and emotionally vulnerable environments. IUGR which results in low birthweight seems to be associated with emotional and physical stressors that happen within a stressed social context. In turn these psychosocial factors tend to

exacerbate the lack of synchronicity noted in the SGA mother-infant dyads.

CHAPTER VI

DISCUSSION

The purpose of this study was to examine the relation between intrauterine growth retardation, maternal perception of their infants, maternal self-esteem, and mothers' recollection of how their own mothers accepted them and encouraged their independence. The study was designed to analyze the interaction of these variables and how they affect the mother infant interaction during a feeding situation.

The findings indicate that mothers of Small for Gestational Age (SGA) infants had higher expectations of their infants than mothers of Appropriate for Gestational Age (AGA) infants, at birth. However, at three months the picture changes dramatically as mothers of SGA infants reported significantly more negative perceptions of their infants on measures of dullness, unpredictability, and fussiness. At birth, both mothers of SGA and AGA infants had similar scores on a measure of maternal self-esteem. However, although it did not reach significance, there was a significant trend towards an increase in the maternal self-esteem of mothers of AGA infants, at three months, while mothers of SGA remained at the initial level. Both mothers and infants in the SGA group presented with more feeding problems at birth

and at three months than AGA mothers. Mothers who had feeding problems had significantly lower maternal self-esteem.

According to our findings low birthweight is a factor that frequently exists within a context of impoverished social and emotional conditions as has been previously suggested by Lester (1979) and Zeskind and Ramey (1981). It seems to be related to chronic or reactive life stressors that result in a variety of complications which in turn appears to affect the growth of the infant in utero. Our sample consisted of Hispanic mothers, a minority group in New York City with very low socio-economic standards, who struggle to adapt to a different culture with a different set of values. The mothers of SGA infants are at the lower end of that socio-economic continuum with a very inadequate social and personal support system.

The picture is further complicated by the frequent use of drugs and alcohol, as a way to escape the pain of their emptiness and their lack of control over their lives. The demands of daily living, within these circumstances, absorb their emotional energies and make it nearly impossible for them to be emphatic and supportive with their own infants. Social programs, especially pre-natal care programs in these communities,

lack the resources of specialized personnel that would respond to the special needs of these mothers. Furthermore, although the awareness of preventive care has increased in our society, it has not reached a high level of priority.

The findings indicate a significant difference between mothers of SGA and AGA infants in their maternal expectations of their infants behavior at birth. The trend was in the opposite direction than that which had been predicted. We expected that SGA mothers were going to have lower expectations beginning at the time of birth. Instead, mothers of SGA had higher expectations of their infants than AGA mothers. They tended to overidealize their infants' capabilities, probably as a way of coping with the anxiety surrounding motherhood which becomes an additional demand in the context of stressful life circumstances.

When confronted with the reality of this new stage mothers apparently entertain the fantasy of a new beginning. However mothers of AGA infants were more realistic in their expectations. SGA mothers' overidealized expectations seem to represent their hope of a more positive life experience. In some cases mothers clearly voiced their expectations that their infants would give them the happiness they had long

searched for. At three months, the picture changed dramatically. Mothers of SGA infants found them to be significantly more fussy, unpredictable, and dull. This is consistent with Als, et al. (1976), Lester, et al. (1986), Brazelton, et al. (1974), and Goggin, et al. (1978) who have reported that mothers of SGA infants found them more difficult and unrewarding.

What becomes clearer in the present study is that while SGA infants, in fact, present particular characteristics that make them difficult to handle, it is also true that the mothers bring to the interaction unrealistically high expectations which tend to exacerbate the lack of synchronicity in the mother-infant pair.

Mothers of SGA infants who had higher and more unrealistic expectations were more shocked and disappointed with the realities of motherhood. The fact that SGA infants were more fragile, disorganized and vulnerable added another negative factor in their otherwise stressed lives. It is another disappointment, another burden. Within this context, mothers of SGA infants were less responsive to positive aspects of the mothering experience. In general it would appear that mothers' sense of well being is nurtured by their ability to find a balance between their expectations, excitement

and joy and their unexpected vulnerability, anxiety and insecurity in the mothering role.

Although there were no significant differences between the groups in maternal self-esteem there was a trend that suggests that maternal self-esteem increases within the context of a mutually responsive interaction. Both groups reported similar levels of maternal self-esteem at birth which suggests that the positive expectations of mothers of SGA infants were coupled with a belief in their mothering ability (maternal self esteem) that was similar to mothers in the control group whose life stressors were relatively less. However, at three months there was a clear trend toward an increase in maternal self-esteem among AGA mothers, while SGA mothers remained the same. The sample size in this study may not have been large enough to detect a significant relationship between maternal self-esteem and birthweight.

The findings follow a trend similar to Shea and Tronick's that mothers whose infants encountered even minor complications had significantly lower self-esteem when compared to mothers whose infants were healthy as newborns. On the other hand the effects of a rewarding experience, based on mutuality seemed to give the mothers a heightened sense of adequacy for mothering. A woman's

sense of adequacy as a mother seems, at least partially, to be dependent on the responsiveness of her child. Mothers' reasons to expect a responsive, alert, healthy child are closely related to their own feelings of well-being as mothers (Ricks, 1985).

Both mothers and infants in the low birthweight group had more feeding problems at 3 months. The increase was higher for the mothers. At birth differences in feeding difficulties between infants, although present in subtle ways, did not dramatically distinguish the groups. SGA infants were similar to newborns in our control group in that they demanded primary caregiving, were mostly disorganized, and dependent on mothers in their ability to provide a holding environment (Winnicott, 1960). However, the mothers report, and their behavior during the feeding interaction suggested that SGA infants were slower in becoming proficient in evoking stimulation from their environment and also in maintaing certain types of stimulation in which there was an interest as it is gradually expected (Bell, 1980).

Mothers of SGA infants exhibited less joy, interest in touching and caressing their infants; their affect and comments about their mothering experience were more negative; there was less attunement and decreased mutual delight in these mother-infant pairs. The crucial

moments of long awaited feedback from their infants (Als, et al., 1976) failed to happen. As a consequence mothers' anxiety towards their mothering role increased when they failed to be effective in providing the infant with a holding secure environment. The synchronicity that Sameroff, et al., (1975) describe when there is a mutually satisfying transaction was not there and resulted in more feeding problems.

These results suggest that low birthweight infants have more difficulties during feeding as measured by both infants and maternal behaviors. These feeding difficulties are still present at three months of age and might explain the individual differences in weight gain reported by Pollit et al., (1978) during the first six months of life thus retarding growth in early infancy.

Mothers with more interactional difficulties or feeding problems were expected to have more difficulties on issues of acceptance and independence in relation to their own mothers as measured by the MFP. The emotional connection of the mothers to their own mothers in our study was additionally assessed through informal conversation guided in broad terms by Main et al's., (1984) technique of eliciting early descriptive memories. Mothers' description of their own mothers and the quality of their interactional style had a direct

relation to how they felt in their mothering role. The connection between a memory where the positive and negative aspects had been balanced, and more self assurance and emotional freedom was evident from our clinical observations. Mothers who described their mothers as emotionally present and their early interaction through the recall of a balanced memory were more receptive and positive towards their mothering experience.

A positive significant statistical correlation was found between feeding problems and encouragement of self reliance by their own mothers (independence). However, when this relationship was analyzed within groups, it was only confirmed for the SGA group. The correlation in the AGA group was not only not significant but also in the opposite direction. That is, there was a negative, non-significant relation between "independence" and feeding problems among the AGA group. This is a puzzling but very interesting finding.

Attachment theory postulates that an attachment figure needs to not only provide care and acceptance but also provide a secure base. Gradual encouragement of self-reliance (independence), permission to explore away from the base with the assurance that the child may come back to "touch base" if the need arises, is thought to be

an essential element of a secure attachment relationship.

One begins to see this trend in the AGA group although not strongly enough to be statistically significant (i.e. high independence, low feeding problems). However, a different phenomenon is evident within the SGA group. It would appear that for these mothers the behaviors tapped by the Independence Scale of the MFP may reflect an attitude of emotional detachment and lack of protection on the part of their mothers. In this case mothers who perceived their own mothers as more detached, had more feeding problems.

There is also the possibility that cultural differences between the the Hispanic sample and the norming population for the MFP affected the way they understood the concept of independence. In talking with these women, one had the impression that they often interepreted the items that Epstein defines as indicative of "independence" as suggesting being "cut-off too early" or "pushed away" by their mothers in childhood. Another issue to consider is that the MFP scale was administered in the first intervention shortly after birth. At that time mothers' hopes were probably heightened which might have led them to idealize the recollection of their interaction with their own mothers. In addition, it is possible that issues of defensiveness

around childhood experiences which can not be taken into account using a self-report type measure, and/or differences in response set styles may have also contributed to the non-significance of these results (Ware, 1985).

Implications and Areas for Further Research and Intervention

The fact that IUGR infants have more difficulties during feeding as measured by both infant and maternal behaviors might result in poor weight gain as previouly suggested. Poor weight gain as a result of feeding difficulties has long standing effects on the infant's development. Feeding difficulties might also have implications for the development of the mother-infant interaction since they are associated with lower maternal self esteem and more negative temperamental ratings by three months of age.

The findings of this study support the idea that mothers within an emotionally stable, organized and supportive environment are better able to cope with the demands of mothering, especially if they have confidence in their mothering abilities. Although not borne out by the statistical analysis, clinical observations suggested that a balance recollection of childhood experiences with her own mother seems to be associated with a more

positive sense of self as a mother and greater trust in her ability to handle the mothering demands.

The findings stress the importance of early identification, by pre-natal care programs, of women who are at risk of having early interactional difficulties with their infants. The high increase in adolescent pregnancies and the rise in child abuse and placement in foster care of very young infants signal the great need, especially in our economically disadvantaged communities, for women to have far more education and support around the mothering experience.

Early intervention programs should underscore the interactional quality of the mothering experience. Mothers should become aware that both units in the mother-infant dyad have needs that need to be satisfied in order for them to feel good and engage in a satisfying reciprocal interaction.

Specially, mothers of SGA infants who are confronted with their babies' immature behavioral organization and ackward responsive patterns, should be made aware what to expect and how to deal with the difficulties these infants present. The education and support provided by special post-natal care programs will help lessen the mothers' anxiety and guilt associated with their difficulty in coping with potentially difficult infants.

Knowledge of the behavioral concequences of the low birthweight syndrome will help mothers in the process of not blaming themselves or their babies for their inability to engage in a smooth and mutually satisfying interaction. A program to provide services and study the benefits of education and support to high risk mothers should be implemented in community hospitals and mental health facilities.

A follow up study to assess the long term implications of feeding and interactional behavior problems in future cognitive and social development should be conducted.

Future studies should explore the area of social support in order to assess what is the role of social support in the maternal adjustment and the development of synchronicity in the SGA mother-infant pair.

A mother's attitude towards the mothering experience should be further studied by viewing her feelings about intimacy (fear of closeness or rejection) within the framework of her relationship with her own mother. Instead of a self-report measure, i.e. the MFP scale, a more open, clinical, standardized interview like the one devised by Main and her colleagues (1984) could be more helpful since it allows for issues of defensivenes to be taken into account in assessing the adult daughter-mother

relationship. In addition, exploration of these issues should be conducted at follow up time to avoid the apparent defensiveness and or idealization the mother goes through at the time of birth with regard to her own attachment experiences.

CHAPTER VII

SUMMARY

The purpose of this study was to explore the reciprocal influence between Small for Gestational Age (SGA) infant and her/his mother. It is believed that the SGA infant's immature behavioral organization, which results in passivity, floppiness, and awkward responsive pattern have a strong impact on the mother-infant interaction, and on the mothers' perception of the infant and their own mothering ability.

The present study proposed that the behavioral characteristics that the SGA infant present may increase, enhance or provoke the possibility of mothers having feelings of incompetence and failure, which ultimately predisposes them to engage in a negative interaction with their infants. Mothers emotional inability to handle the failure of the SGA child to organize his/her behavior would be expected to exacerbate the disharmony between the mother-infant pair and will result in greater distress and more feeding problems for both mother and infant. Under these circumstances one would expect it to be difficult for mothers to engage in a confident exchange with their infant and provide the secure base that Ricks (1984) describes for a secure attachment to be established.

The literature also suggests that a woman's relationship with her own mother influences her confidence in her own mothering ability. Thus, it is expected that the mothers' unresolved attachment issues with their own mothers would surface and further interfere with their ability to cope with the interactional demands of the SGA infant.

Thirty six mothers of Hispanic descent and their infants , 18 AGA (weight: 2600 to 3900 grams) and 18 SGA (weight: 1900 to 2550 participated in this study. After the birth of their infants, mothers were administered the Newborn Behavior Inventory (NBI) as a measure of maternal expectations. The Shea and Tronick Maternal Self-Esteem Inventory, and the Mother Subscale of the Epstein's Mother-Father-Peers Scale as a measure of woman's recollection of her own mothering experience in childhood were also administered. A fifteen minute feeding interaction was observed and feeding difficulties were rated using a pre-designed Feeding Coding System. At three months, another feeding observation and the maternal self esteem measure were repeated, and a measure of infant perception (Bates Infant Temperament Scale) was included.

At birth, there was a trend for mothers of SGA infants to report higher expectations of their infant's behavior

that AGA mothers. At three months, the picture changed dramatically as SGA mothers found their infants significantly more "fussy", "dull", and "unpredictable". Although differences in maternal self esteem between the mothers of SGA and AGA infants did not reach significance, the finding suggests a trend toward higher maternal self esteem scores among mothers of AGA infants from one to three months, while SGA infant mothers showed lower maternal self-esteem scores during the two time periods. Both SGA infants and mothers had significantly more feeding problems at birth and at three months than AGA infants and mothers. Mothers who confronted more feeding problems were found to have lower trust in their own mothering abilities (maternal self-esteem). In recalling their relationship with their own mothers, there were no significant differences between mothers of AGA and SGA on how much they recalled their own mothers to have accepted them. However, mothers of SGA infants tended to recall their mothers as having encouraged them to be more "independent" in childhood than mothers of AGA infants, finding which may reflect concern with own mother's "emotional detachment".

Appendix A

(English)

The Newborn Behavior Inventory

Barbara J. Anderson and Kay Standley

Instructions: Each of these statements is typed on a card. The parent (or other respondent) is instructed to sort the cards into three groups designated: very much like my baby; 2) somewhat or occasionally like my baby; 3) not at all like my baby. There are two sets of cards, one for female and one for male infants.

When my baby is sleeping and a light is turned on, this disturbs her sleep.

The introduction of a new sound, like the television being turned on or the phone ringing, often disturbs my baby when she is sleeping.

My baby usually looks at and follows a brightly colored object that is shown to her.

When there is a sound near the baby she searches for the sound with her eyes or by turning her head.

When I am face-to-face with my baby and not talking, she focuses on me and follows when I move my head.

When I talk to her from out of her line of sight, she notices my voice and looks for me.

When I look into my baby's face to talk to her, she focuses on me and follows when I move my head.

When I try to get my baby's attention, she quickly becomes alert, brightens and stays responsive to me.

When I handle my baby, as in dressing her, her muscles become stiff and her limbs hard to flex.

When she is awake and not crying, the movements of her arms and legs are often short and jerky.

When my baby's head is not completely supported, she seems to make an attempt to keep it from flopping.

When I pick up my baby to cuddle her, she molds to my body and relaxes in my arms.

To console my baby when she is crying I need to rock, talk, and pick her up in order to quiet her.

My baby is upset by disruptions such as being jostled or moved about or having new people in her room.

My baby is likely to cry when she is uncovered, undressed, or diapered.

When a lot of new things happen around my baby, she takes it all rather calmly.

When my baby is lying in her crib or being held, she seems very active.

I have noticed my baby's limbs tremoring or her chin quivering.

My baby shows a startle reflex when she is moved suddenly.

I have noticed that my baby's skin color is sensitive to changes in temperature or to crying.

My baby shows abrupt shifts or changes in mood, such as going from sleep to lusty crying.

When my baby is fussing, she can comfort herself by sucking on her tongue or hand.

My baby often brings her hand to her face and puts her fingers in her mouth.

My baby seems to smile a great deal now.

Inventario de Comportamiento
de Infantes

Instrucciones: Cada una de estas aseveraciones esta impresa en una tarjeta. A la Madre se le instruye sortear las tarjetas en tres grupos que corresponden a las siguientes categorias: 1) Se parece mucho a mi bebe; 2) se parece un poco a mi bebe; ocasionalmente como mi bebe; 3) no se parece a mi bebe en nada. Hay dos categorias de tarjetas, uno para ninas otro para varones.

1. Cuando un bebe estan durmiendo y se les prende la luz, se les interrumpe el sueno.

2. La introduccion de un sonido nuevo, como cuando se prende la television o cuando suena el telefono, muchas veces molesta el sueno de un bebe.

3. Un bebe mira y sigue con la mirada cuando se le ensena un objeto de colores brillantes.

4. Cuando hay un sonido cerca de un bebe, el/ella lo busca con los ojos o moviendo la cabeza.

5. Cuando uno esta cara a cara con un bebe sin hablarle, el bebe fija la mirada en uno y sigue con la mirada cuando uno mueve la cabeza.

6. Cuando uno esta fuera de la vista de un bebe y le habla, el bebe se da cuenta de la voz y busca a uno con la mirada.

7. Cuando uno mira a un bebe a la cara y le habla, el bebe fija su mirada en uno y sigue con la mirada cuando uno mueve la cabeza.

8. Cuando uno trata de ganar la atencion de un bebe, el bebe enseguida se torna muy alerto, se ilumina, y permanece atento a uno.

9. Cuando uno esta bregando con un bebe, como cuando uno lo viste, los musculos del bebe se tornan rigidos y sus extremedidades (piernas y brazos) se tornan inflexibles (tieso)

10. Cuando un bebe esta despierto y no esta llorando, los movimientos de sus brazos y piernas son movimientos cortos y ("jerky").

11. Cuando la cabeza de un bebe no esta completamente sujetada, el bebe parece hacer un esfuerzo por no dejarla caer.

12. Cuando uno levanta a un bebe en brazos para acariciarlo (o acurrucarlo), el bebe se amolda al cuerpo de uno y se relaja en los brazos de uno.

13. Para consolar a un bebe cuando llora, uno tiene que mecerlo, hablarle y cogerlo en brazos para que se tranquilice.

14. A los bebes les incomodan las interrupciones, tales cuando se les (jostled) mueve o cuando hay personas extranas en en el cuarto.

16. Cuando muchas cosas estan pasando alrededor de mi bebé, ella tiende a tomarlo con bastante calma.

17. Cuando mi bebé está acostada en su cuna o cuando se le toma en los brazos, aparenta ser muy activa.

18. He notado que las extremidades de mi bebe tiemblan y la barbilla titiritea.

19. Mi bebe reacciona con susto cuando se le mueve inesperadamente.

20. He notado que el color de la piel de mi bebé es sensitivo a cambios en temperatura y cambia cuando llora.

21. Mi bebé demuestra cambios drásticos en su estado de animo o humor, tales como pasar de estar durmiendo a llantos incontrolables.

22. Cuando mi bebe jirimiquea, ella se consuela a sí misma chupandose la lengua o la mano.

23. Mi bebé con frecuencia se lleva la mano a la cara y coloca sus dedos dentro de la boca.

24. Mi bebé parece reirse con mucha frecuencia últimamente.

Appendix B

Rev. 8/30/77 Bates Infant Temperament Scale

INFANT QUESTIONNAIRE

Part I.

Your baby's name _____ Your name _____

Your baby's birth date _____ Address _____

Your baby's sex _____ _____

Birth weight _____ Phone No. _____

Length at birth _____ Today's date _____

Present weight (if known) _____

****

Part II. On the following questions please circle the number that is most typical of your baby. "About average" means how you think the typical baby would be scored.

1. How easy or difficult is it for you to calm or soothe your baby when he/she is upset?

1	2	3	4	5	6	7
very easy			about average			difficult

2. How easy or difficult is it for you to predict when your baby will go to sleep and wake up?

1	2	3	4	5	6	7
very easy			about average			difficult

3. How easy or difficult is it for you to predict when your baby will become hungry?

1	2	3	4	5	6	7
very easy			about average			difficult

4. How easy or difficult is it for you to know what's bothering your baby when he/she cries or fusses?

1	2	3	4	5	6	7
very easy			about average			difficult

5. How many times per day, on the average, does your baby get fussy and irritable--for either short or long periods of time?

1	2	3	4	5	6	7
never	1-2 times per day	3-4 times per day	5-6 times per day	7-9 times per day	10-14 times per day	more than 15

6. How much does your baby cry and fuss in general?

1	2	3	4	5	6	7
very little; much less than the			average amount; about as much as the average			a lot; much more than the average

7. How did your baby respond to his/her first bath?

1	2	3	4	5	6	7
very well--baby loved it			neither liked nor disliked it			terribly--didn't like it

8. How did your baby respond to his/her first solid food?

1	2	3	4	5	6	7
very favorably--liked it immediately			neither liked nor disliked it			very negatively--did not like it at all

9. How does your baby typically respond to a new person?

1	2	3	4	5	6	7
almost always responds favorably			responds favorably about half the time			almost always responds negatively at first

10. How does your baby typically respond to being in a new place?

1	2	3	4	5	6	7
almost always responds favorably			responds favorably about half the time			almost always responds negatively at first

11. How well does your baby adapt to things (such as in items 7-10) eventually?

1	2	3	4	5	6	7
very well, always likes it eventually			ends up liking it about half the time			almost always dislikes it in the end

12. How easily does your infant get upset?

1	2	3	4	5	6	7
very hard to upset--even by things that upset most babies			about average			very easily upset by things that wouldn't bother most babies

13. When your baby gets upset (e.g., before feeding, during diapering, etc.) how vigorously or loudly does he/she cry and fuss?

1	2	3	4	5	6	7
very mild intensity or loudness			moderate intensity or loudness			very loud or intense, really cuts loose

14. How does your baby react when you are dressing him/her?

1	2	3	4	5	6	7
very well--likes it			about average--doesn't mind it			doesn't like it at all

3

15. How active is your baby in general?

1	2	3	4	5	6	7
very calm and quiet			average			very active and vigorous

16. How much does your baby smile and make happy sounds?

1	2	3	4	5	6	7
a great deal, much more than most infants			an average amount			very little, much less than most infants

17. What kind of mood is your baby generally in?

1	2	3	4	5	6	7
very happy and cheerful			neither serious nor cheerful			serious

18. How much does your baby enjoy playing little games with you?

1	2	3	4	5	6	7
a great deal, really loves it			about average			very little, doesn't like it very much

19. How much does your baby want to be held?

1	2	3	4	5	6	7
wants to be free most of the time			sometimes wants to be held; sometimes not			a great deal—wants to be held almost all the time

20. How does your baby respond to disruptions and changes in the everyday routine, such as when you go to church or a meeting, on trips, etc.?

1	2	3	4	5	6	7
very favorably doesn't get upset			about average			very unfavorably gets quite upset

21. How easy is it for you to predict when your baby will need a diaper change?

1	2	3	4	5	6	7
very easy			about average			very difficult

22. How changeable is your baby's mood?

1	2	3	4	5	6	7
changes seldom, and changes slowly when he/she does change			about average			changes often and rapidly

23. How excited does your baby become when people play with or talk to him/her?

1	2	3	4	5	6	7
very excited			about average			not at all

14. Please rate the overall degree of difficulty your baby would present for the average mother.

1	2	3	4	5	6	7
super easy			ordinary, some problems			highly difficult to deal with

Experimental Items

A. On the average, how much attention does your baby require, other than for caregiving (feeding, diaper changes, etc.)?

1	2	3	4	5	6	7
very little--much less than average			average amount			a lot--much more than the average baby

B. When left alone, your baby plays well by him/herself.

1	2	3	4	5	6	7
almost always			about half the time			almost never--won't play by self

C. How does your baby react to being confined (as in a carseat, infant seat, playpen, etc.)?

1	2	3	4	5	6	7
very well--likes it			minds a little or protests once in a while			doesn't like it at all

D. How much does your baby cuddle and snuggle when held?

1	2	3	4	5	6	7
a great deal--almost every time			average; sometimes does and sometimes does not			very little; seldom cuddles

Escala de Temperamento de Infante de Bates
6 meses

Nombre del Bebe: _____

Numero de Identificacion: _____

Fecha de hoy: _____

Instrucciones: Haga un círculo alrededor del número que mejor describe a su bebé. "Más o menos promedio" representa la puntuación que usted cree que el niño típico recibiría.

1. ¿Cuán fácil o difícil es para ud. calmar a su bebé cuando el/ella esta molesto?

1	2	3	4	5	6	7
bien fácil			más o menos promedio			difícil

2. ¿Cuán fácil o difícl es para ud. predecir cuando su bebé se va a dormir o a despertar?

1	2	3	4	5	6	7
bien fácil			más o menos promedio			difícil

3. ¿Cuán fácil o difícl es para ud. predecir cuando su bebe va a tener hambre?

1	2	3	4	5	6	7
bien fácil			más o menos promedio			difícil

4. ¿Cuán fácil o difícil es para ud. saber qué esta molestando a su bebe cuando el/ella llora o jirimiquea?

1	2	3	4	5	6	7
bien fácil			más o menos promedio			difícil

5. ¿Cuantas veces al día, en promedio, su niño se pone jirimiquioso o irritable, ya sea por periodos de tiempo cortos o largos?

1	2	3	4	5	6	7
nunca	1-2 veces al dia	3-4 veces al dia	5-6 veces al dia	7-9 veces al dia	10-14 veces al dia	mas de 15 veces

6. ¿Cuánto llora o jirimiquea su bebé en general?

1	2	3	4	5	6	7
muy poco mucho menos, que el bebe promedio			promedio; más o menos igual que el bebe típico			mucho; mucho más que el bebe promedio

7. ¿Cómo respondió su bebé al primer baño?

1	2	3	4	5	6	7
bien favorablemente; le gustó mucho			ni le gustó ni le disgustó			terrible; no le gustó

8. ¿Cómo respondió su bebé a su primer alimento sólido?

1	2	3	4	5	6	7
bien favorablemente; le gustó mucho			ni le gustó ni le disgustó			terrible; no le gustó

9. ¿Cómo responde generalmente su bebé a una persona nueva?

1	2	3	4	5	6	7
casi siempre responde favorablemente			responde favorablemente la mitad del tiempo			casi siempre responde negativamente al principio

10. ¿Cómo responde generalmente su bebé a estar en un sitio nuevo?

1	2	3	4	5	6	7
casi siempre responde favorablemente			responde favorablemente la mitad del tiempo			casi siempre responde negativamente al principio

11. ¿Cuán bien se adapta su bebé con el tiempo a cosas como: el baño; alimento sólido, una persona nueva y a estar en un sitio nuevo?

1	2	3	4	5	6	7
muy bien; eventualmente siempre le gusta			acaba por gustarle la mitad del tiempo			casi siempre le disgusta al final

12. ¿Cuán fácilmente se incomoda o se molesta su bebé?

1	2	3	4	5	6	7
Es difícil que se moleste aun por cosas que molestan a la mayor parte de los bebes			promedio			Se molesta muy fácilmente por cosas que no molestan la mayoría de los bebes

13. ¿Cuando su bebe se molesta (por ejemplo antes de alimentarlo, durante el cambio de pañal, etc.) cuán vigorosamente y/o duro jirimiquea o llora?

1	2	3	4	5	6	7
muy baja intensidad y/ o volumen			moderada intensidad y/ o volumen			muy intensamente y duro; pierde el control

14. ¿Como reacciona su bebé cuando lo esta vistiendo?

1	2	3	4	5	6	7
muy bien; le gusta			promedio; le es igual			no lo gusta en lo absoluto

15. ¿Cuán activo es su bebe, en general?

1	2	3	4	5	6	7
muy calmado y quieto			promedio			muy activo y vigoroso

16. ¿Cuánto su bebé se sonrie y emite sonidos de alegría?

1	2	3	4	5	6	7
mucho mas que otros bebe			una cantidad promedio			muy poco; mucho menos que otros bebes.

17. ¿En que ánimo esta su bebe generalmente?

1	2	3	4	5	6	7
muy contento y alegre			ni serio ni alegre			serio

18. ¿Cuánto le gusta a su bebe jugar pequeños juegos con usted?

1	2	3	4	5	6	7
mucho; le encanta			promedio			muy poco; no le gusta

19. ¿Cuánto le gusta a su bebe que lo carguen?

1	2	3	4	5	6	7
le gusta estar suelto y libre la mayor parte del tiempo			aveces le gusta que lo carguen; aveces no			mucho; le gusta que lo carguen la mayor parte del tiempo.

20. ¿Como responde su bebé a cambios e interrupciones en su rutina (tales como cuando lo lleva de visita a algun sitio, de viaje, a la iglesia, etc.).

1	2	3	4	5	6	7
muy favorablemente; no le incomoda			más o menos promedio			muy difícil

21. ¿Cuán facil es para ud. predecir cuando su bebe va a necesitar que le cambien el pañal?

1	2	3	4	5	6	7
muy facilmente			mas o menos promedio			muy difícil

22. ¿Cuán variable es el ánimo de su bebe?

1	2	3	4	5	6	7
cambia poco y lentamente cuando cambia			mas o menos promedio			cambia con frecuencia y rápidamente cuando cambia

23. ¿Cuán exitado se torna su bebe cuando la gente juega o le habla?

1	2	3	4	5	6	7
muy excitado			mas o menos promedio			no se excitado

24. En general, ¿cuánta dificultad le presentaría su bebe a la madre promedio?

1	2	3	4	5	6	7
muy facil			algunos problemas comunes			muy difícil de atender

Appendix C

Maternal Self-ESteem Inventory

(English)

CF	MF	Un	MT	CT
Completely False	Mainly False	Uncertain or Neither True or False	Mainly True	Completely True

1. I found the experience of labor and delivery to be one of the most unpleasant experiences I've ever had. CF MF Un MT CT
2. I think that I will be a good mother. CF MF Un MT CT
3. I am confident that I will have a close and warm relationship with my baby. CF MF Un MT CT
4. I don't have much confidence in my ability to help my baby learn new things. CF MF Un MT CT
5. Looking forward to having a baby gave me more pleasure than actually having one. CF MF Un MT CT
6. I have real doubts about whether my baby will develop normally. CF MF Un MT CT
7. I found the delivery experience to be very frightening and unpleasant. CF MF Un MT CT
8. I often worry that I may be forgetful and cause something bad to happen to my baby. CF MF Un MT CT
9. I am confident that I will be able to work out any normal problems I might have with my baby. CF MF Un MT CT
10. I am concerned that I will have trouble figuring out what my baby needs. CF MF Un MT CT
11. I worry about whether my baby will like me. CF MF Un MT CT
12. I expect that I won't mind staying at home to care for my baby. CF MF Un MT CT
13. I found the delivery experience to be very exciting. CF MF Un MT CT

CF	MF	Un	MT	CT
Completely False	Mainly False	Uncertain or Neither True or False	Mainly True	Completely True

14.	I am concerned about whether my baby will develop normally.	CF MF Un MT CT
15.	I doubt that my baby could love me the way I am.	CF MF Un MT CT
16.	It really makes me feel depressed to think about all there is to do as a mother.	CF MF Un MT CT
17.	I worry that I will not know what to do if my baby gets sick.	CF MF Un MT CT
18.	It is difficult for me to know what my baby wants.	CF MF Un MT CT
19.	I found the whole experience of labor and delivery to be one of the best experiences of my life.	CF MF Un MT CT
20.	I am afraid I will be awkward and clumsy when handling my baby.	CF MF Un MT CT
21.	I feel confident about being able to teach my baby new things.	CF MF Un MT CT
22.	I am confident my baby will be strong and healthy.	CF MF Un MT CT
23.	I feel that I will do a good job taking care of my baby.	CF MF Un MT CT
24.	I know enough to be able to teach my baby many things which he/she will have to learn.	CF MF Un MT CT
25.	I worry about being able to fulfill my baby's emotional needs.	CF MF Un MT CT
26.	I am confident that my baby will love me very much.	CF MF Un MT CT

Maternal Self-Esteem Inventory
(Spanish)

CF	MF	In	MC	CC
Completamente Falso	Mayormente Falso	Incierto Ni Cierto-Ni Falso	Mayormente Cierto	Completamente Cierto

1.	La experiencia de dar a luz es la experiencia más agradable que he tenido en mi vida.	CF MF In MC CC
2.	Creo que seré una buena madre.	CF MF In MC CC
3.	Estoy confiada de que tendre una relación estrecha y carinosa (tierna) con mi bebé.	CF MF In MC CC
4.	No tengo mucha confianza en mi capacidad para ayudar a mi bebé a aprender cosas nuevas.	CF MF In MC CC
5.	La anticipación de tener un bebé me producía mas placer que el tenerlo.	CF MF In MC CC
6.	Tengo serias dudas acerca de si mi bebé se desarrollara normalmente.	CF MF In MC CC
7.	Encontré que la experiencia de dar a luz fue atemorizante y desagradable.	CF MF In MC CC
8.	A veces me preocupa ser olvidadiza y causar que algo malo le pase a mi bebé.	CF MF In MC CC
9.	Me siento confiada de que podré resolver cualquier problema normal que pueda tener con mi bebé.	CF MF In MC CC
10.	Me preocupa que pueda tener dificultad entendiendo lo que mi bebé pueda necesitar.	CF MF In MC CC
11.	Me preocupa si le voy a gustar a mi bebé.	CF MF In MC CC
12.	Espero que no me importe quedarme en la casa a cuidar a mi bebé.	CF MF In MC CC
13.	La experiencia del parto me pareció muy excitante.	CF MF In MC CC
14.	Me preocupa si mi bebe se desarrollara normalmente.	CF MF In MC CC
15.	Me preocupa el que mi bebé pueda quererme de la manera que soy.	CF MF In MC CC
16.	Pensar sobre todo lo que una madre tiene que hacer, me hace sentir realmente deprimida.	MF In MC CC

17. Me preocupa que no sabré que hacer si mi bebe se enferma.	CF	MF	In	MC	CC
18. Me es difícil saber lo que quiere mi bebé.	CF	MF	In	MC	CC
19. Encontré la experiencia del parto una de las mejores experiencias en mi vida.	CF	MF	In	MC	CC
20. Temo ser torpe al manejar a mi bebe.	CF	MF	In	MC	CC
21. Tengo confianza en que le podré enseñar cosas nuevas a mi bebé.	CF	MF	In	MC	CC
22. Tengo confianza en que mi bebé va a ser fuerte y saludable.	CF	MF	In	MC	CC
23. Siento que haré un buen trabajo cuidando de mi bebé.	CF	MF	In	MC	CC
24. Se lo suficiente para ser capaz de enseñarle a mi bebé muchas cosas que el/ella tendrá que aprender.	CF	MF	In	MC	CC
25. Me preocupa si seré capaz de satisfacer las necesidades emocionales de mi bebé.	CF	MF	In	MC	CC
26. Tengo confianza en que mi bebé me querrá mucho.	CF	MF	In	MC	CC

Appendix D

MPI SCALE

RM 4/6/83

Indicate the extent to which the following statements describe your childhood relationship with the people indicated by using the following scale:

1	2	3	4	5
STRONGLY DISAGREE WITH STATEMENT	SOMEWHAT DISAGREE WITH STATEMENT	UNCERTAIN ABOUT STATEMENT	SOMEWHAT AGREE WITH STATEMENT	STRONGLY AGREE WITH STATEMENT

WHEN I WAS A CHILD, MY MOTHER (or mother substitute):

1) encouraged me to make my own decisions.
2) helped me learn to be independent.
3) felt she had to fight my battles for me when I had a disagreement with a teacher or a friend.
4) was overprotective of me.
5) encouraged me to do things for myself.
6) encouraged me to try things my way.
7) did not let me do things that other kids my age were allowed to do.
8) sometimes disapproved of specific things I did, but never gave me the impression that she disliked me as a person.
9) enjoyed being with me.
10) was someone I found very difficult to please.
11) usually supported me when I wanted to do new and exciting things.
12) worried too much that I would hurt myself or get sick.
13) was often rude to me.
14) rarely did things with me.
15) didn't like to have me around the house.
16) would often do things for me that I could do for myself.
17) let me handle my own money.
18) could always be depended upon when I really needed her help and trust.
19) did not want me to grow up.
20) tried to make me feel better when I was unhappy.
21) encouraged me to express my own opinion.
22) made me feel that I was a burden to her.
23) gave me the feeling that she liked me as I was; she didn't feel she had to make me over into someone else.

Mother-Father-Peer Scale
S. Epstein
(Spanish)

Instrucciones: Indique en que medida las siguientes severaciones describen sus relaciones en su niñez con las personas señaladas utilizando la siguiente escala:

1	2	3	4	5
Estoy en total desacuerdo con la aseveración.	Estoy en parcial desacuerdo con la aseveración.	No esta segura	Estoy en parcial acuerdo con la aseveración.	Estoy en total desacuerdo con la aseveración.

CUANDO YO ERA UNA NINA, MI MAMA (O madre substituta)

1) me estimulaba a hacer mis propias decisiones.
2) me ayudo a aprender a ser independiente.
3) sentía que tenía que sacar la cara por mi o resolver mis problemas cuando yo tenia un desacuerdo con una maestra o un amigo(a).
4) me sobreprotegia.
5) me estimulaba a que hiciera las cosas por mi misma.
6) me entusiasmaba a que tratara hacer las cosas a mi manera.
7) no me dejaba hacer cosas que otros niños de mi edad hacian.
8) a veces desaprobabba de cosas específicas que yo hacia, pero nunca me dejo ver que yo le disgustaba como persona.
9) disfrutaba estar conmigo.
10) era una persona yo encontraba muy difícil de complacer.
11) usualmente me apoyaba cuando yo queria hacer cosas nuevas y excitantes.
12) se preocupaba demasiado que yo fuera a hacerme daño o a enfermarme.
13) con frecuencia era ruda conmigo.
14) rara vez hacia cosas conmigo.
15) no le gustaba que estuviera en la casa.
16) hacia cosas por mi que yo podia hacer por mi misma.
17) me dejaba administrar mi dinero.
18) siempre podia depender de ella cuando yo verdaderamente necesitaba su apoyo y confianza.
19) no queria que yo creciera y me independizara.
20) trataba hacerme sentir mejor cuando me sentia triste.
21) me estimulaba a expresar mis opiniones.
22) me hacia sentir que yo era una carga para ella.
23) me daba a entender que yo le gustaba tal y como era; no sentia que de alguna manera tenia que convertirme en alguien diferente.

Appendix E

Feeding Coding System

The following maternal behaviors will be coded:

1-2-5 M pulls nipple out sightly. M applies force to the bottle by arm extension, causing it to move or attempting to remove it away from I's mouth.

1-3-1 M holds bottle in hand after stimulating and/or inserting the nipple at least one time. M holds the bottle in her hand with the nipple not touching any part of the I's oral area. This code is entered only after the M has attempted to insert the nipple into the I's mouth at least once, i.e., it is not entered if the M holds the bottle in her hand immediately after she picked it up.

1-3-2 M puts bottle down. M puts the bottle on a surface and releases her grip from the bottle.

1-9-2 M checks amount consumed. Common usage.

7-1-5 Reprimands. M rebukes or reprimands I.

A summary score for each mother will be derived by adding the frequency of all of these behaviors during the 15-minute observation.

The following infant behaviors will be coded:

1-1-6 I refuses nipple. I keeps lips and/or gums tightly closed to each discrete presentation of the nipple and/or turns his head away from the stimulating object.

1-2-6 I rejects nipple. I rejects nipple either by 1) forcibly ejecting the nipple; 2) spitting out the nipple; or 3) opening mouth with the nipple still in the mouth (sucking usually ceases).

1-9-1 Milk runs out of I's mouth. An overflow of milk runs out of the I's mouth. This is a momentary code and should be recorded whenever a new flow of milk is visible. 1-9-1 is not recorded when the milk is on the infant's chin.

1-9-2 I chokes, coughs, regurgitates, or spits out. The obstruction of normal breathing by some substance or object, resulting in a sound, possibly a cough--to expel air suddenly and noisily through the glottis--to force an object or substance explosively from the mouth, which is partially closed, by blowing.

6-3-5 I grimaces. I contorts facial and/or oral muscles of the face while not crying and/or whimpering.

7-1-1 I whimpers. The I makes a low, whining plaintive or broken sound.

7-1-2 I cries. The I makes loud vocalizations and contorts his facial muscles. Is perhaps red, eyes shut, fists and legs usually waving, loud inhalations.

Three months

FEEDING CHECKLOST 15 minutes

MOTHER:

does not look at infant when feeding
does not touch or engage in interaction
pushes baby away
looks frustrated
complains about baby
Mother turns away
Mother turns to other activities

INFANTS:

rejects food, thows out food
pushes away
fusses, whines or cries
passive, non-reactive. floppy
ignores mother
crawls
drowsy

Appendix F

BABY'S NAME: _____

Subject Number: _____

DEMOGRAPHIC INFORMATION

Date: _____

1. Name: _____

2. Address: _____

_____ City _____ State _____ Zip Code

3. Telephone No. _____

4. Closest Relative: _____ Name _____ Telephone

_____ City _____ State _____ Zip Code

5. Date of Birth ____ - ____ - ____ Place of Birth: _____
Month Day Year

6. Years in the United States: _____

7. Language Preference: _____ Ethnic Group: _____

8. Age at beginning of pregnancy: _____
Was it planned? Yes _____ No _____

9. Did you seriously consider abortion for this pregnancy? Yes ___
No ____ Adoption? Yes ____ No ____

10. Marital status: Married __ Single __ Separated __ Divorced ___

11. Level of school completed:
1. Less than 7th grade ..... ____
2. Junior high school (9th grade) ..... ____
3. Partial high school (10th or 11th grade).... ____
4. High school graduate..... ____
5. Partial college (at least 1 year or specialized training)..... ____
6. College graduate..... ____
7. Graduate degree..... ____

12. Occupation _____ 13. Income: _____
Own 1 ___ Family 2 ____

14. Household Composition:

Name	Relationship	Age	School	Occupation

7. Caretaking Arrangements

A. Daytime main caretakers - Days of the week

1.
2.
3.
4.

B. Nightime main caretakers - Days of the week

1.
2.
3.
4.

Plans for the future:

8. Are you having any problems with your baby?

1. feeding ___yes ___no

_____

_____

2. sleeping ___yes ___no

_____

_____

_____

3. illness ___yes___no

_____

_____

4. personality ____yes ____no

_____

_____

Are you

breast _____

bottle_____

Describe sleeping patterns

_____

_____

_____

Appendix G

CONSENT FORM

I,_____have enrolled my child in a study of mother-infant interaction and the testing procedures to be used have been fully explained to me.

I understand that there are no risks involved in the study and the benefits of this study have been explained to me. The benefits of this study may include a better understanding of mother-infant interaction.

I understand that all results will be kept in strict confidence. I agree that all results may be published without identification of my infant or myself, thus preserving our privacy.

I have been told that I do not have to participate in this study and that my non-participation does not jeopardize the future care of my child.

I understand that I may withdraw from this study at any time, if I so desire. All my questions have been answered and I understand that any questions I may have in the future will be frankly addressed.

If I have any questions I understand that I may contact the principal investigator, Dr. John M. Driscoll, Jr., at (212) 305-8500 or the Office of the Institutional Review Board (212) 305-4191. I will receive a copy of the oral and written consent forms.

DATE_____SIGNED_____

_____WITNESS_____

_____

Hoja de Consentimiento

Yo _____ he accedido a que mi hijo participe en un estudio sobre la interacción materno infantil. Los procedimentos de evaluación me han sido ampliamente explicados.

Entiendo que no hay riesgos envueltos en este estudio y que sus beneficios me han sido explicados.

Entiendo que todos los resultados se mantendrán en estricta confidencia. Los resultados serán publicados sin que se me identfique a mi o a mi hijo, manteniendo nuestra privacidad.

Se me ha comunicado que no tengo que participar en el estudio y que dicha acción no afectará los servicios que recibiremos en el futuro.

Entiendo que me puedo retirar del estudir en cualquier momento si así lo deseo.

Si tengo alguna pregunta me puedo poner en contacto con el Dr. John Driscoll, Jr. En el Tel. (212) 305-8500 o la oficina del IRB (212) 305-4191. Recibire una copia de la presentación oral y de la hoja de consentimiento

Fecha _____ Firma _____

_____ Testigo _____

_____ _____

OVERALL RATINGS OF INTERACTION

MOTHER		INFANT
Verbalizations	Positive Negative	Smiles
Positive Affect	Smiles Laughs	Vocalizes
Negative	Reprimands Complains	Body movement
		Distress
		Sucking - non sucking
Mutual Gaze:		Predominant state
		deep - ligh sleep
		drowsy - alert
		awake/active - crying

CLINICAL IMPRESSION:

Three months

FEEDING CHECKLOST 15 minutes

MOTHER:

does not look at infant when feeding
does not touch or engage in interaction
pushes baby away
looks frustrated
complains about baby
Mother turns away
Mother turns to other activities

INFANTS:

rejects food, thows out food
pushes away
fusses, whines or cries
passive, non-reactive. floppy
ignores mother
crawls
drowsy

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