

## The Role of Recollected Anxiety in Parental Adaptation to Low Birthweight Infants

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**ABSTRACT:** This article examines whether mothers' and fathers' recollections of anxiety surrounding the hospitalization and illness of their preterm/low birthweight infant affect their perceptions of their children several years after discharge. The sample consisted of 37 mothers and 26 fathers whose children were hospitalized in an intensive care nursery in a major university hospital. Parents completed a Nursery Follow-up Questionnaire and a Child Behavior Checklist. The findings indicate that parents' recollections of anxiety during their children's hospitalization have no bearing on their current perceptions of their children. Although mothers recalled having experienced more anxiety than fathers, mothers' and fathers' perceptions of their children were not significantly different.

Researchers over the past two decades have investigated the way in which anxiety affects a mother's adaptation to her preterm, low birthweight and/or critically ill infant. There are divergent views about whether maternal anxiety during the infant's hospitalization in an intensive care nursery is useful, and even necessary, in establishing a positive mother-child relationship.

Kaplan and Mason<sup>1</sup> and Mason<sup>2</sup> argue that increased maternal anxiety is an appropriate and adaptive response to the birth of a preterm infant. They maintain that low levels of anxiety indicate a denial of the infant's life-threatening condition. This, in turn, is predictive of a poor mother-child relationship. The authors further contend that a mother who denies the severity of her infant's illness during hospitalization may be unprepared to meet the baby's needs at homecoming. Such a mother, unable to acknowledge that the infant has special needs, may feel overburdened and may become resentful of the child. If such feelings persist, the mother may develop a negative perception of her baby.

Klaus and Kennell,<sup>3</sup> on the other hand, assert that though maternal anxiety is an inevitable response to the infant's hospitalization, it may adversely affect the mother's relationship with her child for several

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years to come. These investigators do not predict poorer mother-child relationships when mothers do not confront their feelings about the infant's hospitalization. Instead, they argue that the mere *experience* of anxiety during the postpartum period may lead to disturbances in the mother-child bond. In support of this view, Bidder, Crowe and Gray<sup>4</sup> emphasize that mothers' fears in the immediate postpartum period and at the baby's homecoming result in more negative perceptions of the preterm infants. These mothers see their preterm children as being weaker than their term children, even when the preterm children are in their third year. The researchers conclude that maternal anxiety during the infant's hospitalization and at discharge should be minimized.

The purpose of this retrospective study is to investigate whether mothers' and fathers' recollections of anxiety surrounding their infants' illness and hospitalization affect their perception of their children several years after discharge. *Positive perception* is regarded as one important indicator of a favorable adaptation to the child.

### *Sample*

The sample consisted of 37 mothers and 26 fathers whose children were hospitalized in the Intensive Care Nursery at the University of California Medical Center in San Francisco. The children (N=43) were enrolled in a Nursery Follow-Up Program, where evaluations were made of their physical health, motor and cognitive development at six months of age, and then yearly until age eight. After this, the children were evaluated at 11 and 13 years. The sample included four sets of twins and one family in which three of the children had been hospitalized in the Intensive Care Nursery.

Parent participation in this study was obtained when parents brought their children to the Nursery Follow-Up Clinic. Sixty-three (71 percent) of the 89 parents who were asked to take part in this study returned completed forms. There was no significant difference between participants and non-participants with regard to occupational level, age, marital status, or mean years of education. There was a slightly higher number of parents from minority ethnic backgrounds (black, Filipino, and Latino) among the nonparticipants.

The majority of parents in this sample were Caucasian, married, in their thirties, and had completed some college. Seventy-three percent of the fathers had occupations in the "skilled" or "major professional" categories.

The children's mean gestational age was 32 weeks (S.D.=6.2); their mean age at the time of the study was seven years (S.D.=11.8 months). The age range was very broad—six months to fourteen years. The average birth weight was 1421 grams (S.D.=582). Fifty-three percent (N=23) of the children were born with hyaline membrane disease. There was almost an equal number of males (21) and females (22).

Table 1  
 Characteristics of Mothers and Fathers

<u>Attribute</u>	<u>Categories</u>	<u>Summary Description*</u>	
		<u>Mothers</u>	<u>Fathers</u>
Mean Age	--	32.6 yrs.	35.5 yrs.
Marital Status	Married	76	96
	Separated	3	4
	Divorced	16	-
	Single	5	-
Race	White	81	89
	Black	8	-
	Puerto Rican	8	11
	Filipino	3	-
Education	Some High School	9	-
	High School Grad.	24	15
	Some College	38	31
	College Graduate	24	31
	Postgraduate	5	23
Occupation	Unemployed	35	4
	Unskilled	5	-
	Blue Collar	22	23
	Skilled	30	38
	Major Professional	8	35

\*Unless otherwise indicated, these figures are in percentages.

### *Instruments and Procedures*

The researcher requested parent participation at the Nursery Follow-Up Clinic. The Follow-Up Clinic was held weekly, and the data were collected over a six-month period in 1980. All of the parents who were contacted at the Clinic initially agreed to participate: demographic data were collected at this time, and parents were asked to fill out and return in a stamped, self-addressed envelope a Nursery Follow-Up Questionnaire and a Child Behavior Checklist (CBC).

The Nursery Follow-Up Questionnaire focused on three areas: 1) parental anxiety during hospitalization; 2) parental difficulties in meeting baby's needs upon discharge; and 3) past and present parental concerns about the child's health, development, and/or behavior. The questionnaire contained items that were open-ended and structured (multiple choice). The parental anxiety items were adapted from the questionnaire developed by Harper, Sia, Sokal and Sokal.<sup>5</sup>

The Child Behavior Checklist (CBC), developed by Richard N. Walker,<sup>6</sup> measures a broad range of temperament variables. Parents are asked to rate their child on each of 68 adjectives or phrases on a five-point scale. This checklist was selected because the adjectives and phrases are appropriate for children of diverse ages and it is easy to administer. The 68 items of the CBC are then reduced to eight major scales: some examples are "Curious, Thinking," "Social, Friendly," and "Lively, Cheerful." The derivation of these scales, their internal consistency, and their re-test correlations have been given for a nursery school sample.<sup>6</sup>

In addition to data gathered by means of the follow-up questionnaire and the CBC, a sub-sample of parents was selected for clinical interviews. These interviews were held three months after the above data were collected. The researcher phoned parents living in the San Francisco Bay Area to request their participation in a one-and-a-half hour semi-structured interview. This interview was to be conducted by four second year social work graduate students, and would take place in the parents' homes or at the University of California Medical Center. All of the parents contacted agreed to be interviewed; however, only sixteen of the twenty interviews that were arranged by the graduate students were completed. In four cases, parents either forgot or cancelled their appointments and did not wish to reschedule them.

The purpose of the interviews was to obtain more detailed information about parents' experiences surrounding their infants' hospitalization and homecoming, and to learn about parents' current perceptions of their children. Interviewers made ratings of parents' past and current level of anxiety about their child's development, parents' perceptions of their child when compared to children of the same age, the availability of supports during and following their child's hospitalization, and parents' ability to make use of these supports. Further, the interviewers were required to give a summary rating of the parents' overall level of adjustment to their child. In order to promote reliability of the ratings, the researcher held three two-hour training sessions with the interviewers.

## Findings

The purpose of the study was to shed light on the relationship between parents' recollections of anxiety surrounding their infants' hospitalization and their subsequent perception of their child. In order to determine whether there is a significant relationship between such recollections of anxiety and the perception of their child, correlations of mothers' and fathers' anxiety scores and their CBC scores were made. (Anxiety scores were based on parents' reactions to: learning about their infant's condition; seeing their infant for the first time; seeing the equipment surrounding their infant; touching, holding, and feeding their infant.) A total of sixteen correlations were obtained (that is, eight scales were used, and correlations between anxiety and CBC scores were made for the mothers and fathers separately).

Heightened parental anxiety did not predict either favorable or unfavorable perceptions of the child (see Table 2). Only two out of the sixteen correlations were significant ( $p < .05$ ). Even the term "significance" must be used with caution here since the smaller number of correlations beyond the .05 level could have occurred by chance alone. Thus, the findings from this study indicate that there is no relationship between parents' recollections of anxiety and their current perceptions of their child.

There was no significant difference between mothers and fathers with regard to their perceptions of their child as measured by the CBC. However, there was a tendency for mothers to recollect being more anxious than fathers.

Although on the average both parents visited ICN several times a week, mothers' visits ranged from one to four hours, while fathers in general stayed for less than one-half hour. An interesting trend emerged with regard to the relationship between mothers' physical contact with their infants and the number of visits they had with their infant during hospitalization and their recollection of anxiety. Those mothers who first held their infant at a few days of age and who frequently visited the Intensive Care Nursery expressed less anxiety than mothers whose infants were older when first held and who visited the Intensive Care Nursery less often. ( $p < .13$ ).

Even when parents visited the Intensive Care Nursery frequently, interview material revealed that they recalled their hospital visits were filled with anxiety. This anxiety was largely related to the parents' fear of losing their child. For some parents, the fear of loss fostered

Table 2

Correlations Between Mothers' and Fathers' Recollection of Anxiety and Their CBC Scale Scores\*

Scale	Mother's Anxiety		Fathers' Anxiety	
	Correlation	Level of Significance	Correlation	Level of Significance
Active, energetic	-.18	.13	.15	.22
Curious, thinking	.22	.09	.09	.32
Aggressive, assertive	-.09	.29	-.13	.25
Fearful, dependent	-.11	.24	-.34	.04
Social, friendly	.11	.24	.07	.36
Tense, excitable	-.29	.03	.09	.32
Cooperative, conforming	.19	.12	-.00	.50
Lively, cheerful	-.03	.42	.10	.31

\*Correlations were obtained with the Pearson correlation coefficient.

inquisitiveness about their child's condition; this, in turn, prompted regular hospital visits and a desire to interact with the baby. For others, however, the fear of loss engendered feelings of helplessness, making it more difficult for parents to become emotionally attached to their infant. In the latter situation, visiting was avoided—parents felt that there was nothing they could do for their infant, and they believed the visits were unimportant to the infant or to themselves.

Correlations were made between parents' reports of anxiety and infants' birthweight (obtained from each child's medical chart). Mothers' anxiety was significantly related to their infants' birthweight. Hence the lower the birthweight, the higher the level of recollected anxiety for mothers ( $r = .44$ ,  $p < .001$ ). This relationship, however, did not hold for fathers.

### Discussion

The findings indicate that parents' recollections of anxiety during their child's hospitalization have no bearing on their current perceptions of their child (as measured by the CBC). Hence, this study does not support Kaplan and Mason's thesis that low levels of anxiety may

lead to negative perceptions of the child, nor does it favor Kennell and Klaus' argument that increased maternal anxiety portends disturbances in the mother-child relationship.

Some caveats must be made with regard to the interpretation of the results of this study. First, it should be remembered that positive *perception* of the child is only one variable among many that indicates favorable adaptation to the child. Second, this study is retrospective, and as such relies on parents' recollections of anxiety, which may be distorted. Thus, parents' memories of their reactions to their child's hospitalization could be colored by their child's medical course and current developmental status.

Although parental recollections of anxiety may be influenced by events that have intervened since the child's hospitalization (e.g. child's overall progress), it is nonetheless reasonable to assume that if there were differences in parents' levels of recollected anxiety, there would also be differences in their perceptions of their child. This was not borne out by the present study. Even though mothers recalled more anxiety than did fathers while their child was in neonatal intensive care, mothers and fathers did not differ with regard to their perception of their child.

This study revealed that mothers recalled less anxiety surrounding their infant's hospitalization when they had greater amounts of physical contact with their infants and more frequent visits to the Intensive Care Nursery. Fathers, on the other hand, spent *less* time with their infants during the hospitalization period and reported less anxiety than did the mothers. The argument might be made that fathers' shorter hospital visits could account for their reports of less anxiety—that is, fathers were perhaps less involved in the hospital care of their infant and may even have been less aware of the severity of their infant's conditions than were mothers, who visited for longer periods. Interview material, however, indicated that anxiety was present for both mothers and fathers, whether or not they visited the infant. Indeed, when visiting was avoided, parents reported greater difficulty in forming a relationship with their child. The difference in mothers' and fathers' recollections of anxiety might be partially understood in view of sex role expectations of males and females. Males are expected to be "strong" and keep their emotions to themselves, whereas females are encouraged to be expressive of both positive and negative feelings.<sup>7</sup>

An important finding from this study is that mothers' recollections of greater anxiety related to their infants' low birthweight. Low birth-

weight may be an indicator of the severity of an infant's neonatal course. Although medical data have not been correlated with birthweight, it is conceivable that the infants with the lowest birthweight were indeed the most critically ill. The mothers of such infants would understandably recall having experienced increased anxiety. Another explanation for this finding is that mothers may equate the severity of their infant's medical condition and prognosis with low birthweight, even though the medical picture may be favorable. A third interpretation of the relationship between mothers' anxiety and infants' birthweight focuses on the mothers' socialization to experiences of pregnancy and childbirth. Since the expectable outcome of pregnancy for most women is the delivery of a healthy, full-term infant of "normal" weight (at least 5 1/2 pounds), mothers who do not produce such an infant regard themselves as failures, and may have accompanying feelings of guilt.<sup>8,9</sup> These mothers feel as though the pregnancy was not complete, the baby was not complete, and that they also were not complete. Although clinical interviews revealed *low* levels of guilt among mothers, almost all of those mothers interviewed reported that the hospitalization period was an extremely anxious time for them. It is possible that it was less difficult to discuss and admit anxiety about their infants' low birthweight, than it was to admit guilt.

If indeed there is a relationship between guilt and anxiety surrounding the neonatal intensive care experience, then it is understandable why mothers would recall more anxiety related to their infants' low birthweight than would fathers. Fathers may believe that there was nothing they could have done to prevent their infants' preterm delivery, while this would not be the case for many mothers, who might provide any number of explanations (however irrational) about preventive measures they should have taken to insure the delivery of a healthy child.

### Conclusion and Recommendations

This study indicates that an infant's hospitalization in the intensive care nursery is an anxious period for most parents. However, there was no correlation between parents' reports of anxiety and their current perception of their child. Further, although mothers recollected having experienced more anxiety than fathers, mothers' and fathers' perceptions of their child were not significantly different. This finding should



offer encouragement to researchers and professionals who are concerned about the potentially deleterious effects of the hospital experience on the parent-child bond.

While the results obtained from this study are promising, research needs to be conducted with a sample that may be more representative of the target population—the sample discussed in this paper is not random and is primarily composed of Caucasian parents who are married and have relatively high occupational and educational levels.

This study points out several areas that still need to be addressed in future research on parents of children hospitalized in intensive care nurseries. Investigation of the relationship between perceptions of their child and the child's medical and cognitive status would further our understanding of how parents' perceptions about their child are related to their child's actual development. Secondly, a baseline is needed to establish how children in the general population are perceived by their parents. Hence, a comparison of parental perceptions of children should be made between two groups of parents—those whose children were hospitalized and those where the birth and delivery were uncomplicated. Finally, the formal and informal support systems are likely to be highly influential in the way in which parents recall their child's hospital experience and in how they perceive their child. Further investigation should examine the role of support during the infant's hospitalization and in the year following discharge. It would, in addition, be useful to distinguish the *availability* of supports from the parents' *capacity* to make use of them.

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