Supporting Parents of Preterm Infants in a NICU

Problem Statement

Preterm birth as a potential crisis for parents has been well documented (Benfield, Leib & Reuter, 1976; Meier, 1978; Miller, 1978). Mercer (1977) stated that mothers of preterm infants may experience a sense of failure, guilt, loss of self-esteem and anxiety in the early postpartum period and that this is likely to influence their affectionate behaviors toward their infants.

Furthermore, the preterm infant may be unresponsive and difficult to feel close to (Rosenfeld, 1980). She/he may be unable to provide clear distress signals by crying (Goldberg, Brachfeld & DiVitto, 1980). Her/his behavioral cues and appearance may be more aversive than that of the full-term infant and parents may be less eager to interact with their preterm child (Prodi, Lamb, Leavitt, DovoVan, Neff & Sherry, 1978). Researchers have found that parent-infant interaction influenced the development of the infant (Ainsworth, Blehar, Waters & Wall, 1978; Cohen & Beckwich, 1979).

Crnic, Greenberg, Ragozin, Robinson, and Basham (1983) found that mothers of preterm infants with greater stress were less positive in their attitudes and behaviors than mothers of full term infants. They also found that mothers with greater support were significantly more positive in their attitudes and behaviors than mothers with less support. Nursing interventions aimed at providing optimal maternal care may indirectly improve the child's development.

The problem to be addressed therefore is how can a maternity clinical nurse specialist (CNS) best prepare Chinese parents of preterm infants?
preterm infants for the task of parenting during the acute period following the preterm birth in the neonatal intensive care unit (NICU) in Taiwan?

This paper focuses on all preterm infants 37 weeks or less gestation, who are in the N.I.C.U. The N.I.C.U. is a hospital inservice facility which provides acute care for infants; as such it is a setting dealing with crises. No infant admission is preplanned. The infant's outcome and discharge similarly is uncertain (Hancock, 1976). For the purpose of this paper, the American term "maternity CNS" will be used as synonymous with the Taiwanese term "Nurse Supervisor."

**Context**

The setting is a private 40-beded obstetric hospital in a suburban area in Taiwan. The founder, president, and owner of this obstetric hospital is the chief obstetrician. Funding comes from him and individual patients and patient's families. The hospital provides maternal-child health services through in- and outpatient units. There are three labor and delivery rooms, one nursery, a 6-beded NICU, three postpartum wards and one outpatient department.

In 1984, there were 80 preterm infants born in this hospital. The average length of stay in the NICU is 30 days. However, infants may stay for up to 5 months. In the NICU, nursing care is generally on a 2:1, patient-to-nurse ratio. Mothers are discharged from this hospital 3 to 7 days following the delivery. However, no special attention is directed to their unique emotional and educational needs.
There is a patient education program (P.E.) which provides postpartum education for all of the maternity patients in this hospital. Two offices, a conference room and a large classroom are available to the P.E. program on the postpartum ward. The P.E. program does not address behavioral states of preterm infants, nor does it address the emotional reactions that parents experience during the crisis period. The P.E. program is staffed by a nurse coordinator and five registered nurses whose responsibilities include: parenting education classes, telephone advice and referrals.

Role of the Nurse

The coordinator of the P.E. program is the only masters' prepared maternity CNS. Her role is one of an educator, a consultant, supervision and researcher. She serves as a role model for nursing students and staff nurses and, as such, is the major potential change agent in nursing practice. In addition to her clinical roles, she liaises between parents, obstetricians, pediatricians, hospital staff and community agencies. Within these roles, this maternity CNS functions to provide family-centered patient care, to facilitate staff development, to supervise nursing students in their clinical practice and to design and conduct researchers.

Interrelationships

The maternity CNS is in a hospital staff position. She is responsible directly to the chief obstetrician and to the director of nursing. Each maternity CNS is responsible for a preterm nursery. Each maternity CNS often consults with the pediatrician. Each maternity CNS often consults with the hospital staff and community agencies. Each maternity CNS functions to provide family-centered patient care, to facilitate staff development, to supervise nursing students in their clinical practice and to design and conduct researchers.

Parental reactivity

The behavioral state in the preterm infant is closely related to the following factors: the period of time that the infant is expected to live, the infant's gestation, and the infant's reaction to the environment. The period of time that the infant is expected to live depends on the intensity and duration of the behavioral state. The infant's gestation and the infant's reaction to the environment are both factors that affect the behavioral state. The behavioral state is a complex interaction of the infant's gestation and the infant's reaction to the environment. The behavioral state is a complex interaction of the infant's gestation and the infant's reaction to the environment. The behavioral state is a complex interaction of the infant's gestation and the infant's reaction to the environment.

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of nursing. At a monthly meeting, the obstetricians, pediatricians, nurses and the maternity CNS meet together to exchange information. Each mother's progress is discussed beginning with her initial prenatal visit through her labor and delivery, her condition postpartum and that of the infants. This provides staff with the necessary information to plan for education and counseling appropriate for each parent. In this monthly meeting, the maternity CNS often presents ideas and suggestions that are greatly supported by the obstetricians and nurses. There is a good rapport between these team members who recognize the knowledge and expertise of the maternity CNS.

**Significance**

The literature that is specifically applicable to parents of preterm infants who were admitted to the NICU will be discussed in the following categories: (a) the parental reaction to the birth of a preterm infant; (b) the impact of prematurity on parent-infant relationship; (c) the impact of social support on the attitudes and behavior of parents.

**Parental reaction to the birth of a preterm infant**

The birth of a child and initiation of parenthood inevitably leads to a certain amount of change and stress in the lives of parents (Grossman, Eichler & Winickoff, 1980; McKenzie, Canaday & Carroll, 1982; Miller, 1980). Additional stress may be present when the infant is born prematurely. Jeffcoate and associates (1979) compared parental stress following delivery in two groups of 17
families; one, a group of parents of pre-term infants, and the other a control group of parents of full-term infants. Emotional disturbance, delayed mother-child bonding and management problems were significantly more common in the preterm group. It has been recognized that the birth of a preterm infant poses an emotional crisis for the mother (Klaus & Kennell, 1982; Miller, 1978) who may subsequently lack confidence in her caregiving ability (Patiyer, 1981). Some explanation for the experience of greater emotional upset in mothers than in fathers may be found by comparing the relative effects of this disturbance on expectations. Rubin (1984) has identified four maternal tasks in pregnancy: 1) seeking safe passage for herself and her child through pregnancy, labor and delivery; 2) ensuring the acceptance of the child by significant persons; 3) binding-in to her unknown child; and 4) learning to give of herself. The four tasks worked through during pregnancy by each woman in her style are transformed and elaborated after delivery to form the qualitative matrix of mothering, the context in which specific child-care activities are produced (Rubin, 1975). An impasse in any one task area seems to be directly related to the abandonment of the pregnancy. When an infant is born prematurely a mother may not be as emotionally or physiologically prepared for childbirth as she would have been had the pregnancy gone to term, quite apart from any preparation in terms of practical arrangements (Mercer, 1977). The premature birth may represent an interruption in the nature process of the mother's binding-in to her child. She may experience this only because of the birth, also because her friends have tests of her essential Winickoff mother's a infant at ego-threat, directing

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may experience a sense of failure, guilt and loss of self-esteem not only because she did not carry the infant to term (safe passage) but also because the infant differs from the one she and her family and friends had anticipated (Mercer, 1977; Rubin, 1984). Psychological tests of prospective adapters have implied that fatherhood is essentially a mark of sexual identity (Grossman, Eichler, & Winickoff, 1980). In contrast, a major source of enhancement of a mother's self-esteem comes from the normal delivery of a healthy infant at term. Therefore, preterm birth could be more ego-threatening to mothers as they try to suppress guilt feelings by directing blame and anger toward others (Johnson, 1979).

Kaplan and Mason (1977) have listed the psychological tasks which they suggest must be surmounted by a mother of a preterm infant if their relationship is to progress normally. These authors suggest a sequential reaction of parents to the crisis of preterm birth. This begins with grief for the loss of a wished for child and progresses towards an acknowledgement of failure, a resumption of active relating to the infant, and an understanding of the infant's special needs. If the infant is removed before the mother has had a chance to see him/her properly her fears concerning the infant's health and appearance may increase out of all proportion to the actual situation. Jeffcoate (1980) has drawn attention to the frustration often felt by mothers and has pointed out that separation may be viewed as a punishment when feelings of guilt attend the birth. Benfield, Leib, and Reuto (1976) studied 101
mother and father pairs whose preterm infants survived after referral from the hospital of birth to a regional neonatal intensive care unit for special care. As measured by an anticipatory-grief score most parents experienced grief reactions similar to those parents whose infants had died. Sometimes parents react to their feelings by a form of denial. Infrequent visiting to an infant in the neonatal nursery which may indicate that the problems have not been resolved (Minde, Trehub, Corter, Boukydis & Celhoffer 1978).

Minde, Morton, Manning and Hines (1980a) observed the interaction of 32 mothers and their very low birth weight infants during maternal visits to the NICU and during feedings throughout the infant's first months at home. Two observers continuously recorded a total of 12 infant and 10 maternal behaviors. Three to four weeks after each infant's admission, the parents were interviewed for the purpose of focusing on the personal and social backgrounds of both parents and on their experiences during the pregnancy, delivery, and postnatal period of their infant. It was found that mothers showed a consistent level of activity with their infants. This activity level was related to their ability to respond to behavioral cues from the infants and was predictive of caretaking patterns at home. A mother's relationship and that of her husband's with her parents were also found to be significantly related to these maternal activity patterns. Certain limitations of this study should be noted. The sample size of mothers and their infants (n=32) is small for the number of variables measured. Since
observer bias might exist in the nursery and home setting, both the quality and quantity of the data gathered may be influenced by the data collection procedure. These may threaten the internal validity of this study. However, this study provides good evidence that a mother's activity towards her preterm infant in the NICU may be a good indicator of her initial adjustment to this infant. It further suggests that monitoring parental visiting patterns is a means by which staff can be alerted to the possibility of underlying unresolved difficulties.

Newman (1980) observed for one year, individual reactions to the birth of a low birth weight infant. Informal interviews were held with parents, with their infants, in the nursery and at home. The results showed that parents' perceptions of their infants vary. Individual variation between families and even within families reflect individual coping styles and personal adaptation to the stress of a preterm birth. Some parents become intensely involved in the care of their infants while others experienced a period of denial, fear and anxiety before they accepted their surviving infant. Certain limitations to this study should be noted. The sample size, the characteristics and selection of the parents and infants were not discussed in this study. For example, it was not mentioned whether subjects were matched for ethnicity, parity, socioeconomic, cultural background, gestational age and health status. The author described his data but did not analyze it. Since there were no instruments for interviewing or for the
observations, the data collection is questionable and may become a threat to internal validity. Therefore, the findings of this study would be difficult to generalize. However, this study showed an understanding of parental reactions and suggested that recognition of the needs of parents in this stressful situation can be accomplished through listening to their descriptions of their infants and taking seriously their expressions of need, encouraging them to seek help among themselves and acknowledging their importance in the health care team effort (Erdman, 1977; Goldson, 1979; Hawkins-Walsh, 1980; Spennier, 1980).

A complex study design would be in order to critically view parents' needs and feelings. For example, Trause and Kramer (1983) examined two matched groups. One of 38 parents with 18 relatively low-risk preterm infants and the other of 28 parents with 14 healthy full-term infants. The parents were married, primiparous and middle-class. The infants were single births, free of malformations and born in hospital. The Parental Perception Inventory was designed by these researchers to obtain information on each parent's evaluation of their own needs and feelings. Questionnaires were completed within one week of the infants' births.

Results showed that in the first week after birth parents of preterm infants cried more, felt more helpless, were more worried about future pregnancies and their ability to cope, and wanted to talk to hospital staff more. In addition, significantly more mothers of preterm infants experience guilt about their infants' 

condition more so. Smallness is a limiting factor. Reliability is small size findings generalization preterm birth.

In support to these findings, guilt may play a large role in stress.

Impact of

In addition, premature birth is a part of the infant's condition, and sometimes attractive.
condition and worried about themselves losing touch with reality more so than did mothers of fullterm infants. Unfortunately, the smallness of sample size of parents (n=38) of preterm infants (n=14) is a limitation to the study's generalizability. The tool contributed another threat. The author did not establish the reliability and validity of the instrument. With the limitation of small size and the lack of reliability and validity of the tool, the findings of this self-rating survey would be difficult to generalize. The study, however, supports the assumption that preterm birth creates a crisis in the immediate postpartum period.

In summary, intensive care professional nurses must be sensitive to these parental feelings and provide a supportive atmosphere for their expression. Because feelings of helplessness, anxiety, and guilt may interfere in the assumption of the caretaking role, more attention needs to be focused on intervention to minimize parental stress.

Impact of rematurity on parent-infant relationship

In addition to the emotional trauma of giving birth prematurely, extra stresses are likely to be associated with caring for a preterm infant. Bell and Johnson (1980) suggested that the infant's characteristics in terms of appearance and responsiveness play a large part in the expression of caregiving behavior on the part of the mother. The preterm infant, thin, frail, unresponsive and sometimes ugly does not fulfill his/her role in appearing attractive. His lack of responsiveness may also be an important
factor in delaying the parenting process (Johnson, 1979; Rosenfeld, 1980). Goldberg (1979) stated that the preterm infant spends less time alert, and is less responsive to lights and sounds than the full-term infant in the first 4 months of life.

Extending the findings of previous research, Growford (1982) designed a natural experimental study that compared the interactions of 16 preterm and 17 full-term infants and their mothers while the infants were 6, 8, 10, and 14 months of age. The infants and mothers were matched on sex, maternal age, parity, and social class. Home visits were planned on four occasions to obtain recordings of continuous 10 second intervals for one-half using predetermined behavioral categories. Recordings were made, for example, whenever the infant vocalized, looked at an object or looked around the room, cried or played with objects. Similarly, maternal holding of the infant, attending to the infant, and affectionate kissing and hugging was recorded. Results revealed that preterm infants vocalized less, played less, and were more fretful than full-term infants of the same chronological age. The sample size of full-term infants (n=17) and preterm infants (n=16) is small, therefore, the findings of this study would be difficult to generalize.

Furthermore, the ethnic and cultural backgrounds were not reported. The study, however, does support the contention that these preterm infants do not fulfill the parental expectations of an infant; therefore, reciprocity in the relationship between parents and preterm infants is inhibited. Field and coworkers (1979) and

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Magyary (1979) look after the infants, Minde and infants, and the infants reported. Field and coworkers (1979) broaden the results found. These research findings suggest that the adverse effects of preterm infants and their interactions with their parents are limited by the use of instruments.
Rosenfeld, (1982) found that infants spend less time interacting while the room, and this was inversely related to social class. This finding was supported by the work of (1984) indicating that preterm infants were more difficult to look after than were full-term infants. Similarly, the results of Minde and coworkers (1978) who studied mothers of low birth weight infants, indicated that mothers who interacted little with their infants reported poor relationships with their own mother and with the infant's father, while high interactive mothers reported much more satisfying previous interpersonal relationship. Nursing intervention includes nursing action directed toward helping parents broaden their network of supportive persons by linking them up with resources in the hospital or community (Crnic, Greenberg, Ragozin, Robinson & Basham, 1983).

**Impact of social support on Parental attitudes and behaviors**

Crnic and coworkers (1983) assessed 52 preterm and 53 full-term infants and their mothers. Infants were matched for family ethnicity and maternal education. Four measures were collected from structured interviews when the infants had been home from the hospital for 1 month. These measures were of life stress, social support, general life satisfaction, and satisfaction with parenting. These researchers found that social support for the mother moderated the adverse effects of stress on the mother's life satisfaction and behaviors. Additionally, mothers with greater stress were less positive in their attitudes and behaviors. Maternal social support had significant effects on infants interactive behavior. Certain limitations of this study should be noted. The life stress instrument and social support scale lacked adequate reliability and

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validity testing in this study. Although infants were matched for family ethnicity and maternal education, the descriptor infant's health status did not specify whether sickness of a preterm infant would produce maternal stress (Magary, 1894). With these limitations, the findings of this study cannot be generalized. However, this study proves that social support influences parenting attitudes and mother-infant interaction.

Although a number of studies have shown that social support act as a buffer against the experience of stress (Haggerty, 1980) data from Crnic and coworkers' (1983) indicates that buffering effects are not routine for mothers of newborn infants, but rather are found only under certain conditions. Intimate support was the one variable to act as a moderator, and this occurred only for the mothers' life satisfactions and not parenting attitudes or behavior. Only community support showed buffer effects on the mothers' interactive behaviors in the separate analysis. No buffer effects were found for mothers' parenting attitudes or affective behaviors towards their infants with any type of social support. The evidence suggests some specificity in the role of social support as a moderator of stress and that the efficacy of this support may depend on the intensity of maternal stress and the proximity or intimacy of the support relationship. Nuckolls, Cassel and Kaplan (1972) linked the buffering hypothesis of social support to pregnancy. The found that those who had low psychosocial assets developed a significantly higher rate of pregnancy complications than those with greater

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Norbeck and Tilden (1983) examined 117 mothers to determine the effects of psychosocial variables on pregnancy outcomes. Modest but statistically significant relationships were found between life stress, social support, and emotional disequilibrium. Four types of social support were measured. These were emotional concerns (liking, love, empathy), instrumental aid (goods or services), information (about the environment), and appraisal (information relevant to self-evaluation) (House, 1981). High life stress in the presence of low emotional support was significantly related to high emotional disequilibrium; high life stress in combination with low instrumental support predicted the occurrence of pregnancy complications.

Research has begun to delineate the importance of significant support to the adaptation to parenthood (Bell & Johnson, 1980; Unger & Powell, 1980; Wandersman & Kahn, 1980). Varying types of social support appears to produce specific effects on specific outcome variables. This necessitates the measurement of differing individual support systems, as well as a multitude of outcomes (Wandersman & Kahn, 1980). Cronenwett (1983) using a prospective, longitudinal design found that the impact of social support and social network was similar for mothers and fathers. Men reported having fewer sources of emotional support, while women derived a significant proportion of emotional support from friends. In terms of adaptation to parenthood, three variables were associated with
positive parenting outcomes for both men and women. These variables were access to emotional and information support and quality of the marital relationship.

Theory

The theoretical framework of crisis intervention can be utilized in planning a method of support for parents of preterm infants in the premature nursery setting. Umana, Cross, and McConville (1980) defined crises as time-limited periods of behavioral or subjective upset during which usual problem-solving behaviors are inadequate to provide a solution to the difficulty confronting the individual (Beaton, 1984). Infante (1982) suggests crisis to be a person's emotional response to a hazardous event rather than to the event itself and that anxiety, depression, helplessness, and total disorganization are common responses of a person experiencing a crisis event.

Crisis may be classified as either situational or maturational (Caplan, Mason & Kaplan, 1965). Childbearing may be thought of as a maturational crisis in the developmental life cycle of a woman (Tilden, 1980). The need for acute intensive nursing care may be thought of as a situational crisis. Therefore, the birth of a preterm infant can be conceptualized as both a maturational and a situational crisis. Factors important to crisis resolution are the perception of the event leading to the crisis, the availability of situational support, and the presence of adequate coping mechanisms (McCubbin & Patterson, 1982). Crisis intervention strategies are aimed at growth;
aimed at strengthening these crisis-meeting resources by promoting growth and adaptation.

Beaton (1984) proposed a conceptual model for nursing based on a systems model of crisis intervention to guide nursing practice in supporting parents of preterm infants in the acute care setting (see Appendix A). This systems model of crisis intervention emphasizes the social context in which the individual and the crisis stimulus come together. In the case of preterm birth, the NICU represents the social context within which initial interactions between the parent and the infant occur. The systems approach regards a crisis as a problem in social system interactions.

The parents' experiences of the crisis of preterm birth will depend on what happens to them both outside the NICU, i.e., their interactions with other social systems, and their experiences within the NICU, and their particular relationship with their infant.

In a busy NICU, staff often do not have the time, the emotional energy, or the preparation to attend simultaneously to the needs of the parents as well as those of the infant (Green, 1979). Beaton (1984) suggests, a specific individual be identified to serve as coordinator of a parent support program and that this might alleviate the strains on staff of trying to meet all needs of parents and infants.
The first solution for supporting parents of preterm infants who are hospitalized in the NICU would be achieved by the development of a one-to-one relationship between the maternity CNS and parents. An initial contact in the delivery room would be made for the purpose of establishing a therapeutic relationship. This would involve assessing the parents' emotional needs. In order to prepare for the parents' first visit with their infant in the NICU, the maternity CNS would design an introductory booklet for parents which describes the visiting policies, nursing personnel and equipment (Whaley, Gosling & Schrierner, 1979). For the staff's preparation, an inservice education program would be initiated in order to increase unit awareness and sensitivity to patterns of parental visiting and coping. The NICU policies in this hospital allow parents to visit their infants any time.

The maternity CNS would then interview parents on the pre-scheduled appointments. Four types of support would be available from the maternity CNS. These would include: 1) emotional support through nonjudgement acceptance, empathetic listening, and an expression of caring and concerns; 2) informational support through teaching and referral to support groups or other community agencies; 3) appraisal support through counseling, reassurance and feedback regarding infant care, mothering skills, and personal adjustment; and 4) instrumental support as needed.
support through direct care-giving activities for mother and infant as needed (Gronenwett & Kunst-Wilson, 1981; House, 1981).

The teaching interventions would help parents focus on the special characteristics of their infants, the meanings of these characteristics and how they affect the infant's interaction capabilities (Gorski, Davison & Brazelton, 1979). Minde (1980a) found that a mother's level of interaction with her infant may be based on her ability to recognize social cues from the infant. The CNS's goals for this solution would be to help parents to 1) successfully cope with the crisis situation; 2) realistically perceive their preterm infant's physical conditions and needs; 3) adapt to the infant's hospital environment; 4) assume the primary caretaking role and 5) assume total responsibility for the infant upon discharge. The ongoing evaluation from parents and staff regarding the intervention strategies would come from verbal feedback. This would enable the CNS to understand the effective methods by which parents could be helped to cope with the crisis of preterm birth.

The second solution for supporting parents of preterm infants who are hospitalized in the NICU would be to facilitate parents' involvement in a self-help support group. The role of the maternity CNS would be to support the formation and development of this group. The average group size would be limited to a maximum of 20 members. Within two days following an infant's admission to the NICU, the maternity CNS would conduct an initial interview and assessment of
parental needs. At this first contact, the purpose of the group would be introduced. Parents would be invited to join the groups which would meet twice a week. In addition to parent members and the maternity CNS, this group would have a "veteran mother" who would have already experienced the crisis of preterm birth and survived its transitions. The purpose of the parent self-help support group would be to facilitate the expression of feelings, the sharing of strategies, the acquisition of knowledge about preterm infants and social learning. Social learning might include role modeling, for example which could be provided by the veteran mother (Meleis, 1975). Groups that have used this approach have positively influenced parental coping abilities and interaction patterns between parents and their infants (Minde, Shosenberg, Marton, Thompson, Ripley & Burns, 1980b; Mangurten, Slade & Fitzsimmons, 1979).

As a coordinator of the group, the maternity CNS would utilize a democratic style of leadership and discussion methods to promote cohesion, problem-solving and communication. The content of the meetings would be determined by the group participants and might consist of unstructured discussion and/or structured presentations of educational programs. The recordings of the group's progress would be documented as a communication tool among parents, nurses, physicians and the maternity CNS. In order to promote growth and development of the parent support group, monthly newsletters would be sent to veteran mothers, and nurses and physicians, keeping them informed of past, present and future activities of the group.

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During scheduled meetings, the veteran mothers and NICU staff would discuss the group's past and future activities. Feedback about the group's strengths and weaknesses would then come from nurses, physicians and parents.

**Analysis of the Alternatives**

The two solutions were evaluated on the basis of acceptability, feasibility, cost, risk and value, utilizing an outcome matrix developed by Bailey and Claus (1975) (see Appendix B). These criteria were considered of equal importance and given an individual value ranging from high to low. An ideal value was determined, and scores from 3 (most ideal) to 1 (least ideal) were assigned for each criterion. The solution which received the highest score as compared to the ideal was selected as the best solution for the problem.

**Acceptability.** Alternative one, one to one relationship between the maternity CNS and parent might be well accepted by the physicians and director of nursing. However, postpartum and nurse staff might feel time constraints between their responsibilities towards the physical care of the neonates and towards providing parental support. Parents themselves might also experience ambivalence between seeking support from an official source, the maternity CNS, and that obtainable through their own social support networks. Although parents could gain supports from the CNS's knowledge and experience in dealing with parental concerns and needs, the maternity CNS may be seen as not having experienced such
loss, grieving, and further disequilibrium, especially when other support is inadequate to take over from the hospital based nursing support.

Support groups would receive a low risk rating (3). Parents choosing to participate in the groups would not only receive the benefits of consensual validation, peer support, and socialization while the group is ongoing, but are likely to receive long-term benefits of consensual validation, peer support, and socialization while the group is ongoing, but are likely to receive long-term benefits as well. Narrative reports and research related to parent support groups suggest that the majority of participants continue the friendships developed in their groups for periods ranging from one to five years after the group terminates (Boukydis, 1982). Such reciprocal relationships can facilitate long-term mastery of the developmental tasks related to rearing of preterm infants and engender dynamic adaption.

Value. A high value rating for an alternative is derived from its relative worth to the client and the likelihood that it will produce the outcome desired by the professional; a low rating reflects lack of worth and undesired outcomes. The value of both one-to-one support and self-help group support can be inferred from theoretical analyses of nursing support. Social support must be reciprocal to be most satisfying and effective (Ellison, 1984). On this basis, one-to-one support would be rated as moderate (2) in value. Although the direct support provided by the CNS can be instrumental
in facilitating coping during crisis (Elsas, 1981; Grant, 1978; Hancock, 1976; Miller, 1978; Mercer, 1977; Opirhory, 1979; Norbeck, 1981), the value of such support is limited by its undirectional nature.

Indirect support on the other hand, as provided through support groups, promotes the creation and maintenance of a reciprocal, enduring social support system among participants (Boukydis, 1982). Research suggests, however, that support groups suffer from a class bias. Mothers who are most responsive to self-help group intervention are middle-class women who are motivated to share their own experiences with others (Boukydis, 1982; Cronenwett, 1980; Dillard, Auerbach & Showalter, 1980; Enriquez, Harrell & Putman, 1980). Several authors have suggested that being exposed to parents with infants in radically contrasting social circumstances to themselves may be a possible source of additional stress to some parents and may lead to poor attendance at NICU groups. For this reason, support groups would also receive a moderate rating (2).

Selection of Alternative

The outcome matrix (see Appendix B) graphically demonstrates support groups to be the best solution to the problem being considered. Research studies evaluating the role of self-help support groups for parents of preterm infants are consistent in the conclusion that group participation provides a major source of support for parents (Meier, 1978; Minde & coworkers, 1980; Shosenberg, 1980). Although these studies all differ in
methodology, sample populations, and timing of the group intervention, their findings are notably similar. Increase in social contacts and sources of support, a decreased sense of isolation, improved self-esteem and coping ability, more positive views of parenting, and recognition of the normality of problems and concerns are all reported as outcomes of sharing in a support group (Boukydis, 1982).

Comparative research looking at what arrangements lead to a successful group or parents' organization has not yet been developed. However, the benefits gained from the establishment of groups for parents during the early phase of their infants' hospitalization in the NICU has been described. Minde and coworkers (1980b) reported on a group which operated successfully in a large unit. There were enough parents with infants in the same circumstances who could meet together early and pass through some of the same phases as their infants got older. Each group had a veteran mother who had had a similar small infant in the NICU during the previous 9 to 12 months and was known for her general sensitivity and integrity. The veteran mother was seen as the official animator of the group. Parents who had participated in the groups visited their infants significantly more often in hospital than did the parents who had not participated in the same group. They also touched, talked, and looked at their infants in the face-to-face position more during their visits and rated themselves as more competent on a number of infant care measures. Three months after their infants were discharged, the parents who had participated in the group rated the experience as negative, while the parents who had not participated had a positive view of the experience.
after discharge of the infants, group mothers continued to show more involvement with their infants during feedings and were more concerned about their general development. In summary, both theory and research suggest that support groups for parents of preterm infants offer an important form of social support which can promote the interaction between parent and infant and reduce the danger of postpartum disequilibrium.

Implementation

The maternity CNS would plan, organize, and direct the implementation of the parent self-help support group. Before beginning an implementation plan the maternity CNS considers the constraints and capabilities of the problem. Constraints are seen as negative forces working against a solution and capabilities or resources are seen as positive forces promoting solution. Possible constraints include (a) the perceived threat to the staff nurses in NICU of their feeling of inadequacy, (b) the inability to attract a diversity of parents, (c) restricted financial support, and (d) the veteran mother's ability to discuss her feelings openly and objectively.

In implementing the proposed plan, the maternity CNS will need:
1) a number of staff meetings designed to gain mutual understanding, to alleviate pressure, and to promote effective collaboration before decision-making, 2) to use her skills in interpersonal relations to promote the effectiveness of the staff and parental groups, 3) audiovisual and written resources and adapted from the Parent
Education Program, as well as other aids which might be required for this special group, and 4) involvement of a selected veteran mother in regular meetings in order to obtain support from nurses, physicians, and the maternity CNS herself.

The maternity CNS in Taiwan could plan, organize and direct the implementation of the parent support groups. A modification of the planning guide outlined by Boakydis (1982) and Shosenberg (1980) will be used.

The first phase of implementation would consist of the searching for and education of veteran mothers. This relatively new concept to this subculture of mothers of preterm infants is quite familiar to the culture in Taiwan for it would be seen to be based on effective volunteer efforts. Veteran Chinese mothers of surviving preterm infants could be contacted by telephone and/or letter to initially introduce the group to them. They then will be selected for the group based on two factors: (a) that they have had an infant in the NICU and (b) that they have dealt positively with their own crisis of having an infant requiring intensive care. Regularly scheduled workshops and meetings will be held for the veteran mothers to learn group processes, empathetic listening skills and sensitivity of when to share their own experience and when to listen to others (Exoo & Eager, 1980).

The second phase of implementation would involve the NICU staff and other professionals. At a regular monthly meeting, the maternity CNS would present ideas to share an awareness of family needs with these mothers. The veteran mothers' discussions were held in a setting in which the veteran mothers were asked to help plan the education of families of preterm infants, the NICU staff and other professionals. Veteran mothers were held in high esteem in Taiwan, and their input and insight have been incorporated in the plan as an important resource for the NICU staff. The second phase would begin after the NICU staff and families of preterm infants have become familiar with the group; veterans would begin to take a more active role in the education of the NICU staff and families. The educational process would also help develop the group's ability to help other NICU families to cope with the crisis of having an infant requiring intensive care.
needs with preterm infants and to discuss ways that staff could be of help to families while their infants were hospitalized. During these meetings, veteran mothers would be invited to discuss their feelings as parents of a child who also required intensive care. The veteran mothers would also discuss experiences with staff that were helpful to them while their infant was hospitalized. These inservices would be helpful to the staff in obtaining insight into the experiences of parents and the impact that staff can have on families. The proposed group would be presented and professional input and support would be solicited. When these suggestions had been incorporated a final group plan meeting with the appropriate administrators would be held to obtain institutional approval for the plan and the small budget necessary for its publicity and resource materials. Ongoing feedback and support would be obtained from the existing Parent Education Program staff and NICU.

Finally, the meeting for the parent self-help support group would begin. Four days prior to the peer group meeting, parents whose infants were in the NICU would be contacted by a letter placed on their infant's isolate or through telephone contact. The monthly newsletters would be published and sent to veteran mothers, nurses and physicians.

Evaluation

Evaluation of the effectiveness of the parent support group in helping parents of preterm infants during the acute period of the infant's hospitalization in the NICU for the task for parenting is a
five-step process: 1) The four following criteria would need to be met. 2) Parental questionnaires (see Appendix C) developed by the CNS would be used to measure the results of the group performance. 3) Data would be collected by the NICU staff at the time of the infant's discharge. 4) Data would be analyzed by the CNS. and 5) Verbal feedback regarding each group session would be solicited from participants and the veteran mother.

The criteria which would need to be satisfied if parent support groups are to be seen as effective are as follows:

I. **Objective** parents should feel they have the opportunity to share and to learn to cope with the stress of having a preterm infant. **Criterion.** Most parents (80%) should confirm that they receive at least moderately satisfactory support about identifying, expressing their needs, relieving their feelings of guilt, anxiety and helplessness. (Questions 1 to 3)

II. **Objective** Parents should become acquainted with their infant in the hospital, share in meeting his/her present and future needs. **Criterion.** Most parents (80%) should express that they get at least moderately satisfactory information about their infant's condition (mean score above 3) (Questions 4-10).

III. **Objective** Parents should be satisfied with general information about the characteristics and growth and development of preterm infants. **Criterion.** Most parents (80%), at least moderately, should be satisfied with the

...
information about the development of preterm infants (Questions 11-15)

IV. Objective  Parents should have the confidence to take care of their preterm infants. Criterion. Most parents (80%) should express, at least moderately, satisfaction with their tasks of parenting. (Questions 16-20)

Each item in the questionnaires will be scored from 1 (most unsatisfactory) to 4 (most satisfactory), so that a total score for the 20 items could range from 20 to 80. A total score above 60 with the score of each individual item above 3 will be acceptable. A t-test statistic will be applied to test the significance of the difference between the experimental group (parent self help group) and the control group (parents who do not attend the support group).

If the results are not acceptable for the project the CNS, the NICU staff and veteran mother will meet during a regular monthly meeting to discuss the problems of the parent support group. The methods to improve the effectiveness of the group will be developed at that time.

Summary

It is very important to attend to parental reactions and the crisis produced following preterm birth. This paper has explored two alternatives for assisting parents whose preterm infant is in the NICU to successfully go through the crisis situation. Guided by the Bailey and Claus (1975) matrix problem-solving model, the parent support group rated higher against five criteria.

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Appendix A

Systems Model of premature Birth

### Appendix E

#### Decision-Making Outcome Matrix

<table>
<thead>
<tr>
<th>ALTERNATIVES</th>
<th>CRITERIA</th>
<th>ACCEPTABILITY</th>
<th>FEASIBILITY</th>
<th>COST</th>
<th>COST</th>
<th>RISK</th>
<th>SCORES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. one to one support</td>
<td>Mod. (2)</td>
<td>Low (1)</td>
<td>High (1)</td>
<td>Mod. (2)</td>
<td>Mod. (2)</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>2. Support groups</td>
<td>High (3)</td>
<td>Mod. (2)</td>
<td>Low (3)</td>
<td>Low (3)</td>
<td>Mod. (2)</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>IDEAL</td>
<td>High (3)</td>
<td>High (3)</td>
<td>Low (3)</td>
<td>Low (3)</td>
<td>High (3)</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

Appendix C

Parent Group Questionnaire

Age __________________________ Address __________________________

Education: Elementary School 1 2 3 4 5 6 7 8
High school 9 10 11 12
Vocational school 1 2 3 4
or junior college
Graduate school or 1 2 3 4
professional school

Marital Status: Single_____ married_____ widowed _____
divorced_____ separated_______

Religion: Catholic _____ Protestant_____ Buddhist_____
Others ________ None_______

Monthly family income (N.T. dollars)

Less than $5,999 _______ $6,000 to 9,999 _________
$10,000 to 14,999 _______ $15,000 to 19,999 _________
$20,000 to 24,999 _______ $25,000 to 29,999 _________
$30,000 to 34,999 _______ $more than $35,000 _________

What other supportive person do you have? (State numbers if more than one)

Father_________ friends_________
mother_________ spouse _________
siblings_______ family (state relation) _________

Do both you and your spouse attend this group?

Do you live out of town away from the hospital? If so, where?
Appendix C (continued)

Parent Group Questionnaire

Did the group help you with:

1. identifying and expressing your needs?
2. relieving any feelings of guilt or failure around the preterm birth?
3. relieving any feelings of helplessness or isolation?
4. providing information about your infant's health condition and treatment?
5. seeing your infant's Moro reflex and sucking reflexes?
6. seeing your infant's response to sound?
7. seeing your infant's response to light?
8. understanding your infant's ability to be consoled?
9. understanding your infant's alertness?
10. noticing your infant's behaviors, for example: smiling, crying and looking at?
11. providing information about a general preterm infant's Moro and sucking reflexes-
12. providing information about preterm infant's response to sound?
13. providing information about preterm infant's response to light?
Appendix C (continued)

Parent Group Questionnaire

Did the group help you with:

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Somewhat</th>
<th>Moderately so</th>
<th>Very much so</th>
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<tbody>
<tr>
<td>14. providing information about preterm infant's level of consciousness?</td>
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<tr>
<td>15. providing information about preterm infant's behaviors, for example, smiling, looking at and crying?</td>
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<td>16. feeling competent as a mother or father?</td>
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<td>17. feeling confident of your ability to take care of your infant?</td>
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<td>18. feeling confident to know what your infant wants?</td>
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<td>19. feeling confident to know what to do when your infant cries?</td>
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<tr>
<td>20. feeling confident to know how your infant changes and grows?</td>
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</table>

Thank you for completing this questionnaire.
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