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PARENTAL RESPONSE TOWARD IMPENDING HOSPITALIZATION
OF CHILDREN FOR SURGERY

by

Christine M. Kinavey

THESIS

Submitted in partial satisfaction of the requirements for the degree of

MASTER OF SCIENCE

in

Nursing

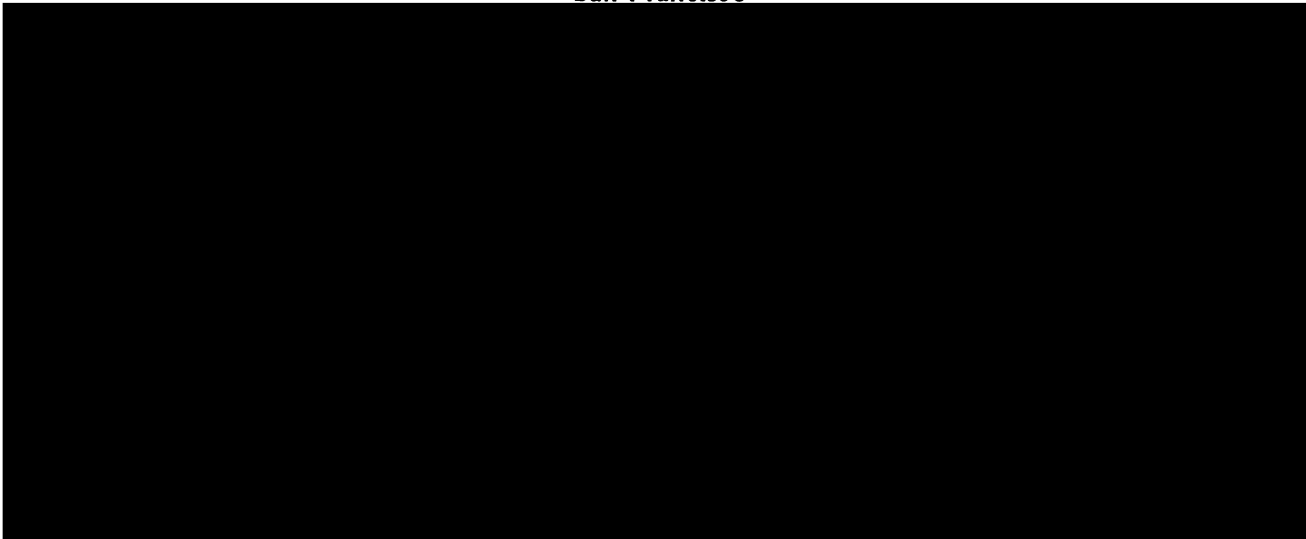
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Abstract

Presently, preadmission programs for pediatric patients ignore parental needs. One reason may be that the needs and concerns of parents during a child's preadmission period to the hospital have not been clearly identified. Since parental anxiety is frequently transmitted to children, it is imperative that nurses identify these concerns and determine how anxiety-provoking these concerns are.

The purposes of this exploratory study were to: (a) identify concerns associated with a child's impending hospitalization for surgery that parents consider anxiety-provoking, (b) determine the amount of anxiety experienced by parents prior to their child's admission to the hospital for routine surgery, (c) establish the correlates of parental anxiety, and (d) identify the type of information parents who have a child scheduled for routine surgery receive as a matter of standard practice.

A convenience sample of 23 parents (15 mothers and 8 fathers), which included seven mother-father pairs, completed an anxiety assessment scale and were interviewed. Data from the anxiety assessment scale indicated that mothers admitted to experiencing preadmission anxiety more often and to a greater degree than fathers. In addition, maternal anxiety as measured by the mean anxiety scores on Spielberger's STAI-A-State Scale was influenced by educational background, marital status, ethnicity, the child's age and birth order, and type of surgical procedure performed. However, because of the small sample size, none of these variables were found to be statistically significant ($p \leq .05$) during nonparametric testing.

Furthermore, semistructured parental interviews revealed six predominant parental concerns contributing to preadmission anxiety. Potential for normalcy, physical pain, risk of anesthesia, separation anxiety, effect of hospitalization, and preadmission education were identified by constant comparative analysis. Additional analysis disclosed that proper preadmission education by health professionals served to mediate parental anxiety.

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CHAPTER I

THE STUDY PROBLEM

Introduction

Children who are not prepared for hospitalization and surgery experience more physical and psychological distress than children who are prepared (Blake, Wright, & Waechter, 1963; Blom, 1958; Gellert, 1958; Plank & Ritchie, 1971; Prugh, Staub, Sands, Kirschbaum, & Lenihan, 1953; Vernon, Foley, Sipowicz, & Schulman, 1965). As early as 1953 (Prugh et al.), concerned researchers began investigations designed to identify and eliminate the major stressors precipitating anxiety in children during hospitalization. Since that time the ability of health care professionals to care for the psychosocial needs of children has increased. Preadmission hospital programs, home preparatory booklets, parent rooming-in programs, play therapy, and child-centered units have all been designed to assist pediatric patients in their adjustment to the hospital experience. Although these interventions have reduced both physical and psychological stress, children continue to enter the hospital in an anxious state (Vardaro, 1978).

One probable cause for childrens' anxiety is parental anxiety (Adams & Sarason, 1963; Campbell, 1957; VanderVeer, 1949; Vardaro, 1978; Visintainer & Wolfer, 1975). Several studies suggest that there is a substantial correlation between parent-child anxiety states (Adams &

Sarason, 1963; Campbell, 1957; VanderVeer, 1949; Vardaro, 1978; Visintainer & Wolfer, 1975). Despite this fact, few studies have addressed the anxiety-provoking concerns of parents prior to the admission of a child for a surgical procedure (Mahaffy, 1965; Skipper & Leonard, 1968; Wolfer & Visintainer, 1975). In addition, parental response toward a child's impending hospitalization is only presently being explored (Meng, 1980). Since preadmission programs aimed at reducing anxiety in the child without concurrent efforts to reduce anxiety in the parent may be inefficient, research is needed to establish anxiety-provoking concerns of parents regarding their child's impending hospitalization.

Need for Study

In 1980, approximately 1,068,000 children under the age of 15 had surgery performed as in-patients in nonfederal, short-stay hospitals (National Center for Health Statistics, 1982). Although numerous measures have been undertaken in an attempt to alleviate the anxiety experienced by these children adjunct to hospitalization and surgery, none have been completely effective. Consequently, children and their parents continue to experience high anxiety levels prior to and during hospitalization (Vardaro, 1978). Once admitted to the hospital, health care professionals tend to focus in on reducing the child's anxiety, with only secondary attention being given to the parents (Skipper & Leonard, 1968; Wolfer & Visintainer, 1979). This approach ignores ample evidence linking a child's psychosocial adjustment to parental response (Irwin & Lloyd-Still, 1974; Skipper & Leonard, 1968; Wolfer & Visintainer, 1979). In order to reduce children's anxiety, it is

imperative that sources of parental anxiety be addressed during the preparation process (Meng & Zastowny, 1982). This becomes particularly important considering the significant role parents play in mediating their child's response toward anxiety-producing events and facilitating their coping abilities (Duffy, 1972; Mahaffy, 1965; Skipper, Leonard, & Rhymes, 1968; Visintainer & Wolfer, 1975; Wolfer & Visintainer, 1975). Research directed at measuring preadmission anxiety in parents and identifying causative factors associated with it may provide baseline information for the design of more effective preadmission programs for children.

Statement of the Problem

Presently, preadmission programs for pediatric patients ignore parental needs (Meng & Zastowny, 1982; Prugh et al., 1953; Skipper, Leonard, & Rhymes, 1968). One reason may be that the needs and concerns of parents during a child's preadmission period to the hospital have not been clearly identified. Since parental anxiety is frequently transmitted to children (Campbell, 1957; Meng, 1980; Skipper, Leonard, & Rhymes, 1968; VanderVeer, 1949), it is imperative that nurses identify these concerns and determine how anxiety-provoking these concerns are.

Purpose of the Study

The purposes of this study are to: (a) identify concerns associated with a child's impending hospitalization for surgery that parents consider to be anxiety-provoking, (b) determine the amount of anxiety experienced by parents prior to their child's admission to the hospital for routine surgery, (c) establish the correlates of parental

anxiety, and (d) identify the type of information parents who have a child scheduled for routine surgery receive as a matter of standard practice.

Assumptions

The basic assumptions underlying this research project are as follows:

1. Parents can identify concerns related to a child's impending hospitalization for routine surgery,
2. Parents with children who are scheduled for surgery are anxious,
3. Parental anxiety is transmissible to young children.

Definition of Terms

For the purpose of this research, significant terms will be defined as follows:

Anxiety - An anticipatory emotion produced by an appraised threat (Lazarus, 1977).

Concern - A matter of marked interest or regard relating to the hospitalization of a child for surgery.

Impending hospitalization - A time span of 72 hours prior to and including the morning of admission to the hospital.

Child - A youngster living in a household with one or both parents who is between 7 months and 17 years of age.

Parent - An adult caretaker sharing permanent residence with a child and claiming all parental rights and responsibilities.

Psychological stress - A disturbance in the person/environment relationship resulting from an event or transaction which is perceived by the individual to be damaging, threatening, or challenging (Lazarus & Launier, 1978).

Routine surgery - A prescribed operation for children that does not require postoperative admission to the intensive care unit.

Stressor - An event or transaction that parents perceive to be harmful, threatening, or challenging (Benner, Roskies, & Lazarus, 1980).

Limitations of the Study

Interpretation of study results is limited by:

1. The effect of the researcher on parental anxiety levels,
2. The effect of the tools on parental anxiety levels,
3. The selection of a sample drawn during a specific time period from a three-physician surgical group,
4. The lack of controls for socioeconomic status, family constellation, type of surgical repair, child's cognitive/psychosocial and developmental age, and the exact time and place of interview.

CHAPTER II

REVIEW OF RELEVANT LITERATURE

Introduction

There is a paucity of literature examining parental responses toward the impending hospitalization of children for surgery. This lack of attention to parental responses toward children's hospitalization may be reflective of the propensity of health care professionals to concentrate on the child rather than the parents, both before and during hospitalization. Unfortunately, this narrow viewpoint fails to recognize the theory of emotional contagion that links parent-child emotional responses (Campbell, 1957; Prugh et al., 1953; VanderVeer, 1949). Additionally, studies by Meng (1980), Prugh (1967), and Skipper and Leonard (1968) suggest that unchecked parental anxiety may render parents incapable of providing psychological support and security prior to, during, or after their child's hospitalization and surgery.

Children's Hospitalization: Admission Studies

The first study to examine parental responses to a child's hospitalization for surgery was undertaken by Gofman, Buckman, and Shade (1957). In this study, 100 parents were interviewed using a focused, open-ended interview guide at the time of the child's hospital admission for the purpose of ascertaining their reactions to the admission

process, as well as their own and their child's preparation. These children were hospitalized for a variety of surgical procedures. Research findings from this study indicated that more than one-half of these parents reported experiencing overwhelming anxiety upon admission of their child to the hospital. Additionally, these parents had such difficulty coping with their own fears that they were unable to assist their children.

A second study, by Irwin and Lloyd-Still (1974), examined the concerns and anxieties of parents during the child's actual hospital stay. In this study, a parental support group was formed in a large metropolitan children's hospital. The purpose of the group was to examine parental response during a child's hospitalization for surgery in order to develop methods by which parental trauma could be minimized. The group was open to all parents of children hospitalized in both the 12-bed intensive care unit and the 38-bed surgical care unit. Group meetings were held for 12 consecutive weeks in the hospital setting. The main goal of the meetings were to help parents effectively deal with issues surrounding the hospitalization process. During the 12-week period, approximately 49 parents attended the meetings (39 mothers and 10 fathers). Common themes repeatedly expressed by parents about their child's hospitalization included: (a) anxiety over leaving the child alone in unfamiliar surroundings, (b) concerns about relinquishing the care of the child to an unfamiliar care-taker, (c) anxiety over the actual surgery, including the effect it might have on the child's physical appearance, and (d) concerns over the effect the hospitalization would have on the child's siblings.

Freiberg (1972) conveniently surveyed 25 mothers about their experiences during their child's hospitalization and the effects it had on the entire family in the first few days following discharge. Among the 25 mothers, 19 were white and six were black; 15 were from working-class families, seven from middle-class families, and three from professional families. Children's ages ranged from 15 months to nine years, with the majority (16) of children between one and five years of age. Results of the open-ended interview revealed that lack of information about diagnosis, procedures, and treatments was the most frequent cause of maternal anxiety.

In summary, these studies suggest that parents have concerns related to: (a) leaving the child alone in the hospital with unfamiliar caretakers, (b) the child's physical safety, (c) the effect of hospitalization on siblings, and (d) lack of information about the child's medical care and treatment procedures. Although these studies also suggest that parental concerns provoke anxiety prior to and during a child's hospitalization, limitations in the study design preclude generalization. For example, failure to control for the type of surgical procedure or the severity of the child's illness makes it difficult to measure whether parental anxiety is attributable to the uncertain prognosis (outcome) of the child's illness or the hospitalization process itself.

Studies suggest that there is a positive correlation between parental anxiety and children's adaptation to hospitalization (Adams & Sarason, 1963; Campbell, 1957; Prugh et al., 1953; VanderVeer, 1949). In the exploratory study by Prugh and colleagues (1953), two groups of 100 children each were selected for study and placed in either a control

or experimental group. Both groups were closely matched in relation to age, sex, and diagnosis. In general, these patients were between the ages of 2 and 12 years and were hospitalized for acute illnesses of short duration. The main purpose of the study was to evaluate: (a) immediate reactions and adaptations of parents and children to hospitalization, (b) the type and degree of long-range emotional reactions of children and families who experienced hospitalization, and (c) the degree of modifiability of such emotional reactions.

The control group received traditional ward care which consisted of weekly visiting periods of two hours each for parents. There was no formal encouragement for parents to participate in the child's care and no organized hospital orientation program to facilitate adjustment for either parents or children. The experimental group received a "package" program consisting of daily visiting hours for parents, early ambulation of pediatric patients, a play therapy program, integration of parents into the child's care, and psychological support and preparation for the child prior to and during traumatic procedures. In addition, a special admission procedure was developed whereby parents were given materials specifically designed to help them understand the needs of their child and what role they could play in his/her care.

During both the control and experimental periods, the same techniques for studying and recording data were employed. The techniques utilized were as follows:

1. Social workers interviewed one or both parents shortly after admission with respect to the child's reaction to illness prior to hospitalization, the nature of parental anxieties,

the personality of the child, previous methods of adaptation, and general family relationships.

2. Independent observations were recorded by a psychologist, play supervisor, head nurse, and other professional ward personnel concerning the child's behavior on the ward, his/her relationship with personnel and patients, his/her reactions to a variety of procedures, and both the child's and the parent's behavior on admission and during visiting hours.
3. Informal psychological appraisals were made in order to correlate the effects of changes in physical condition upon the child's emotional state and intellectual functioning.

Children's adaptation to the hospital experience was measured by the child's overall capacity to relate to peer and adult members of the ward group. Additionally, the child's capacity for reality testing and his successful mastery of anxiety according to age level (through verbalization and play) were also used as measurements. Children's adaptational levels were categorized as adequate, difficult, or inadequate.

Parental adaptation to the hospital experience was measured by the ability to control feelings of anxiety or guilt over the child's illness, to give emotional support, and to accept the certainty of the child's illness. Parents' adaptational levels were classified as adequate, difficult, or inadequate.

Chi-square analysis of the data revealed that children and parents receiving the experimental hospital care showed less severe reactions to hospitalization ($p < .01$). Furthermore, children who demonstrated the most successful adjustment and adaptation to hospitalization had parents

(especially mothers) who successfully adjusted and adapted to this experience. In other words, there was a direct positive correlation between parent-child adjustment capabilities.

Despite the age of this exploratory study and the semi-structured, subjective nature of the data collecting process (independent recordings via direct observation by a psychologist, play supervisor, head nurse, and other professional ward personnel at various unspecified times throughout the hospital stay), it remains a classical research study. This is attributable to the fact that it was one of the first studies to explore the influence of parents on a child's adjustment to hospitalization and prompted radical changes in the care and treatment of children and their families.

The first experimental study to examine the effects of a support protocol for parents during their child's hospitalization for surgery was done by Mahaffy (1965). Forty-three children were randomly selected from a pediatric surgical unit in a large urban hospital. All of the children were between the ages of 2 and 10 years and had been admitted for tonsilectomy and adenoidectomy surgery (21 experimental patients and 22 controls). Parents (mothers) of children in the experimental group were visited by a research nurse during identified "critical periods" (evening of admission, return from recovery room, and day of discharge) in the course of the child's hospitalization. During these visits the research nurse would supply needed information, answer questions, and generally dispel fear. The control group was given routine nursing care. Mahaffy hypothesized that dispelling parental fears by providing information would result in a reduction of distress in the child as measured by (a) lower blood pressure, pulse, and temperature,

(b) decreased crying and vomiting, (c) earlier consumption of fluids, and (d) earlier first voiding. Parental anxiety was not measured. Mean temperature, systolic blood pressure, pulse rate, and number of hours elapsing until first voiding for the experimental and control groups were tested for statistical significance by the use of an unpaired t-test. Incidences of crying and vomiting in the two groups were compared and tested for significance using the Chi-square test. The Kolmogorov-Smirnov test was used to test the difference in ease with which the children took fluids.

Results of the study supported the researcher's hypothesis. Experimental children had lower temperatures ($p < .0005$), pulse rates ($p < .005$), and blood pressures ($p < .0005$) than the control group. They also voided sooner, took fluids more readily, and had fewer incidences of crying and vomiting ($p < .0005$). These findings tended to support the growth and development theory that children between 2 and 10 years manifest their fear, apprehension, and anxiety with overt and covert behaviors (Mahaffy, 1965).

Later studies by Skipper and Leonard (1968) and Wolfer and Visintainer (1975) modified Mahaffy's (1965) original research design to include parents as well as children. Using identical numbers of 80 parents and children, the investigators hypothesized that parents and children who received continued psychological support at "stress points" throughout hospitalization would be less anxious and better adjusted. Similar physical indicators (i.e. temperature, pulse, blood pressure, ease of taking fluids, incidences of crying/vomiting, and time to first voiding) were used to measure the stress experienced by children during hospitalization. Additionally, blind observer ratings of the children's

upset behavior and cooperation with procedures were made at six potential stress points: (a) during the admission exam, (b) during the venapuncture, (c) on administration of the preoperative medication injection, (d) on transport to the operating room, (e) during induction, and (f) on first fluid intake postoperatively. Ratings were made using the Manifest Upset and Coping and Cooperation Scale. This scale measured upset, coping, and cooperation using a 5-point Likert scale. A 90 percent interrater reliability was achieved between the observers trained in the utilization of these scales.

Assessment of parental experiences during the hospitalization period were measured via an 18-item Satisfaction with Information Questionnaire, a self-reporting Anxiety Questionnaire, and a 20-item Satisfaction with Nursing and Medical Care Questionnaire. The construct validity of each of the above three scales had been satisfactorily measured and tested by the researchers in three previous experiments.

In summary, all measurements of anxiety showed that children who received "experimental support" manifested overall less anxiety and psychological upset than the control group.

Preadmission Studies

Although the effect of hospitalization on children and families has been studied, an extensive review of the literature indicated that only three research studies were primarily concerned with responses of parents toward impending hospitalization and surgery. The first study (Meng, 1980) involved 100 elective surgical candidates between the ages of 4 and 10 years and their parents. These children were prescheduled for elective surgery at a 750-bed medical center in upstate New York and

were randomly assigned to an experimental or control group. Subjects assigned to the experimental group were given a tour of the hospital and video-taped puppet show about hospitalization and surgery one week prior to admission. The control group received routine hospital care.

Upon admission to the hospital, parents were interviewed with regard to their reaction as well as their child's reaction to impending hospitalization. Results of the study indicated that both control and experimental parents felt uncomfortable and ill-equipped to prepare their child for impending hospitalization without support and information from a knowledgeable source. Additionally, mothers felt that their own anxiety was a greater stress factor than their child's anxiety. Consequently, parents in the experimental group expressed enthusiasm for the preadmission program and felt that it facilitated adaptation for both their child and themselves.

A second study examining parental responses toward a child's impending hospitalization was conducted by Vardaro (1978). The purpose of this study was to investigate preadmission anxiety between mothers and their children. The sample consisted of 18 children between the ages of 36 to 66 months and their mothers. The children were conveniently selected from a population of children admitted for a hernia repair at two urban teaching hospitals. The investigator interviewed each subject two weeks prior to admission. All children in the sample had to be toilet trained, receiving no prescribed medicines, and never previously hospitalized. Mothers had to be taking no prescribed medications and willing to collect a 24-hour urine from both herself and her child. The home was visited twice. The first visit was two days prior to surgery. At this time the mother was given the

State-trait Anxiety Questionnaire (Spielberger, Gorsuch, & Lushene, 1970) and instructed in collecting a 24-hour urine specimen for 17-Hydroxycorticosteroid (17-OHCS). The second visit occurred on the morning of admission in order to pick up the urine and have the parent complete the Prehospital Behavior Questionnaire. The Prehospital Behavior Questionnaire contains 16 specific questions and one open question. It was adapted from two sources: (1) David Vernon (Vernon, Schulman, & Foley, 1966) Posthospital Behavior Questionnaire, where parents were asked to identify behavior changes in their children following hospitalization, and (2) Louise Wulff (1975), where videotapes of preschool children's behaviors were correlated with anxiety levels by teachers. There is no reliability and validity of the Prehospital Behavior Questionnaire.

Results of the study indicated a highly significant correlation between mother-child anxiety levels ($r = .9334$, $p < .001$) and 17-OHCS levels ($r = .8699$, $p < .001$). These findings support the emotional contagion hypothesis which holds that a parent's emotional state is transmitted to a child (Campbell, 1957; VanderVeer, 1949). The major limitation of Vardaro's study, however, was its lack of sufficient sample size to allow for generalization.

Lastly, Meng and Zastowny (1982) examined the effectiveness of preadmission preparation programs for parents in decreasing both parent-child stress levels throughout the hospital stay. In an effort to reverse these stress levels, an experimental stress inoculation training program was developed. The stress inoculation program involved three phases of training: (a) education about the nature of stress, (b) development of specific coping skills, and (c) exposure to

stressors, requiring utilization of coping skills previously developed (Meichenbaum & Turk, 1976). The program was based on the assumption that exposure to tolerable amounts of stress stimulates coping mechanisms and increases resistance to stress.

In this study, parents of both preschool and school-age children who were prescheduled for surgery participated in the stress reducing program prior to hospitalization. Parents were shown a 16-minute film which was designed to, first, educate them about the nature of stress and offer a variety of coping skills for dealing with stress, such as deep breathing techniques and distraction. The parents were then expected to assist their children in developing these coping skills. The second half of the film depicted a mother and child actually performing a dress rehearsal of the hospital experience during simulated stress points (admission, evening before surgery, intramuscular injection, transport to the operating room, and return from recovery room). At each simulated stress point a coping dialogue was flashed on the screen to assist parents in helping the child cope. Additionally, parents and children were given a booklet covering each stress point with corresponding coping dialogues and strategies. Lastly, parents were also asked to keep a behavioral diary for themselves and their children in the weeks preceding and following hospitalization. The diary was a complete behavioral index which consisted of communicative, motor, depressive, social, obsessive, and somatic indices. Parents also recorded their daily stress levels.

Results of the study indicated that, regardless of the preparation received, preadmission anxiety-related behaviors increased for all children over the prehospital week and peaked on the day of admission.

The most minimal rise in stress levels was noted in those children participating in the experimental program. In addition, these experimental children coped significantly better during the designated hospital stress points than the control group. Posthospital adjustment in these children was also significantly better. Lastly, parental stress levels positively correlated with children's stress levels. Conclusions reached by Meng and Zastowny (1982) were: (a) the week prior to hospitalization is a critical time for both parents and children in developing stress, (b) hospital preparation programs should be implemented prior to anxiety levels reaching their peak, and (c) parents can be effectively utilized in preparing their child for hospitalization and surgery. The two major limitations of the study involved the author's failure to clearly describe the behavioral diary index and to specify the precise amount of time the families were under study.

Parent-Child Relationships

Adams and Sarason (1963) attempted to correlate parental anxiety with anxiety in their high school children. The subjects were 72 male and 60 female high school students in their senior year and both of their parents. Parents and children completed an attitude questionnaire. The attitude questionnaire was comprised of the following four scales: Test Anxiety Scale (TAS), Need for Achievement Scale (NAS), Lack of Protection Scale (LPS), and Bendig's (1956) brief version of Taylor's Manifest Anxiety Scale (MAS). The TAS, NAS, and LPS were taken from Sarason's autobiographical survey (Sarason, 1958, 1959, 1964).

The TAS was designed to measure anxiety during testing situations. The NAS measures anxiety with respect to an individual's need for achievement in both testing and nontesting situations. The LPS was designed as a measure of separation anxiety. The fourth scale used (Bendig's) is a short-form version of the Taylor Manifest Anxiety Scale (MAS) and measures trait anxiety.

Data analysis consisted of separating the families into two groups according to the sex of the child. Statistical computations were drawn on the basis of this division (boys and their parents and girls and their parents) for all four anxiety scales. In addition to correlating the scores of these family groups, the data were analyzed for parent-child differences in mean scores, including standard deviations, for each of the four scales.

Results of the study indicated that there were consistent positive correlations between anxiety scores of daughters and their mothers. There were no significant correlations between the anxiety scores of daughters and their fathers. There were two positive correlations between the anxiety scores of mothers and their sons: LPS ($r = .26$, $p = .05$) and MAS ($r = .32$, $p = .01$). There was one significant positive correlation between MAS scores of fathers and sons ($r = .28$, $p = .05$). These findings suggest that children's anxiety may be meaningfully studied within the context of the family system and that anxiety may be related to either the sex of the parent and child, the degree of identification between parent and child, and/or the parent's role within the family.

Limitations of the study were as follows: first, the researchers failed to control for the socioeconomic status of the sample population;

second, the sample population was conveniently selected. Both of these factors posed a threat to the external validity (generalizability) of the study.

Summary

In summary, the literature suggests that the admission of a child to the hospital for surgery is an anxiety-producing event for both parents (particularly mothers) and children (Adams & Sarason, 1963; Meng, 1980; Meng & Zastowny, 1982; VanderVeer, 1949). Anxiety experienced by parents reduces the effectiveness with which they can provide the psychological support necessary for their child's effective adjustment to the hospital environment (Gofman, Buckman, & Shade, 1957; Prugh et al., 1953). Studies aimed at measuring the effect of support given to parents prior to or during critical periods/stress points in their child's hospital stay showed that support resulted in less anxiety and psychological upset for their children, both during and after hospitalization (Mahaffy, 1965; Meng & Zastowny, 1982; Skipper & Leonard, 1968). Investigation of sources of preadmission anxiety in parents is limited. Therefore, a rigorous identification of sources of parental anxiety during the preadmission period will facilitate the development of effective stress-reducing preadmission programs which will help parents assist their children to cope with hospitalization.

CHAPTER III

CONCEPTUAL FRAMEWORK

Introduction

Since the focus of this research is to identify and measure the anxiety-provoking needs and concerns of parents regarding their child's impending hospitalization, the conceptual framework utilized in this research study is a combination of VanderVeer's (1949) Emotional Contagion Theory and Lazarus' (1981) Model of Stress and Coping.

Emotional contagion theory. According to VanderVeer (1949), emotional ill health can be defined as a disturbance in equilibrium. Disturbances can occur when forces confronting the individual are too strong or the individual's capacity too weak. Minimal amounts of disequilibrium are commonly experienced and may be readily produced in young children. The first symptom of psychological decompensation is anxiety (VanderVeer, 1949). Anxiety is defined by VanderVeer as an unpleasant emotion which arises whenever an individual feels threatened, either by his impulses, his conscience, or by his external situation.

According to VanderVeer, there are three sources of anxiety in children: (a) contagion, (b) external mechanisms such as painful procedures or exposure to severely ill or dying children, and (c) conscience. Anxiety produced by contagion is the simplest type. It is exemplified in the child who becomes frightened while in the company

of frightened adults. In essence, children can sense uneasiness in the "adult-protector" and will quickly absorb such emotions. The mechanism involved in this interaction is believed to be a weakening of the child's ego as a result of the removal of adult support.

The existence of contagion anxiety was first recognized in England during World War II and was documented by Anna Freud (1942) in her writings about young children in wartime. During the bombings, children exposed to hazardous events were undisturbed as long as the adults with them remained calm. Conversely, children exposed to objectively harmless events developed acute anxiety if in the presence of scared adults.

Psychological stress and coping. Whereas children become anxious by contagion, adults, according to the Lazarus model of stress, become anxious only when an event or transaction is appraised as being potentially or actually disruptive (Benner, Roskies, & Lazarus, 1980). According to the Lazarus model, regardless of the severity of the environmental stressor or intensity of the physiological response, psychological stress will not occur unless the individual interprets the situation as harmful, threatening, or challenging (Benner, Roskies, & Lazarus, 1980). In other words, a person's cognitive appraisal of an event or transaction ultimately determines emotional response and adaptational outcome. This model approaches psychological stress and coping from a cognitive-phenomenological perspective (Folkman, Schaefer, & Lazarus, 1979; Lazarus, 1966; Lazarus & Launier, 1978).

The process of appraising a transaction or encounter for personal meaning is termed "primary appraisal" (Lazarus, 1981). Factors contributing to primary appraisal include the balance of power between

harm and counterharm resources, the imminence of the confrontation with harm, the ambiguity of the threat stimuli, motive strengths and patterns, general belief systems about transactions with the environment, and intellectual resources (Lazarus, 1966). According to Lazarus and Launier (1978), primary appraisal of one's own well-being can be divided into three categories. A person may consider a specific situation to be either irrelevant, benign-positive, or harmful. Appraisal of the event as irrelevant means that the event is judged as having little if any impact on the person's well-being. A benign-positive appraisal means that the event has no injurious implications or holds positive significance for the individual. A stressful appraisal means that the person construes the event to be harmful, threatening (future harm), or challenging.

Emotional reactions, then, are products of how a person interprets the significance of events or transactions to his/her own well-being (Wrubel, Benner, & Lazarus, 1981). Consequently, an appraisal of an encounter as irrelevant will produce insignificant emotional reaction, a benign-positive appraisal will produce neutral or positively-based emotions, and a stressful appraisal will produce negatively-based emotions such as anxiety, fear, guilt, and anger (Lazarus, Kanner, & Folkman, 1980).

All difficult or stressful encounters require coping (Wrubel, Benner, & Lazarus, 1981). In other words, an attempt must be made to resolve the disturbed person-environment relationship or regulate the emotional distress (Benner, Roskies, & Lazarus, 1980). Individual considerations devoted to coping are called "secondary cognitive appraisals" (Lazarus, 1981). A "secondary appraisal" occurs when an

individual evaluates the resources and options available to meet the requirements of the situation (Benner, Roskies, & Lazarus, 1980). Factors contributing to secondary appraisal include the degree of threat, viability of alternative coping actions, the location of the agent of harm, situational constraints, motive strengths and patterns, ego resources, and coping dispositions (Lazarus, 1966).

In summary, with primary appraisal the issue is "how much am I in danger from an event" whereas, with secondary appraisal, the issue is "how much am I in danger from what action I take against the threatening event" (Lazarus, 1966). Since the person-environment relationship is constantly changing, both primary and secondary appraisals are continually occurring in all adaptational encounters (Wrubel, Benner, & Lazarus, 1981). Additionally, both processes are often nearly instantaneous and frequently unconscious (Lazarus, 1966).

Summary

For the purposes of this study, it will be assumed that negatively-based emotions, such as anxiety in parents, are a function of primary appraisal. Consequently, parents who consider the hospitalization of their child to be either irrelevant or benign-positive will experience the lowest level of anxiety. Hence their children will experience little preadmission anxiety. On the other hand, those parents (and subsequently their children) whose primary appraisal of hospitalization is harmful, threatening, or challenging are at greatest risk of developing high levels of preadmission anxiety.

Other parents at high risk for developing preadmission anxiety are those parents who secondarily appraise their resources as being

inadequate. Inadequate resources may be a result of limited alternative coping mechanisms, situational constraints (i.e. single-parent status), and/or decreased ego resources. As a consequence, these parents and their children will be in need of additional psychological support both prior to and during the admission process.

In summary, this chapter has combined VanderVeer's Emotional Contagion Theory and Lazarus' Model of Stress and Coping into a framework underpinning the present research study. In essence, a parent's cognitive appraisal (primary and/or secondary) of a child's impending hospitalization for surgery will ultimately determine adaptational outcomes. Furthermore, parental emotional responses toward such an event are directly related to the degree of perceived threat to the child's well-being. Parents who perceive impending hospitalization as a threat to their child are more likely to experience negatively-based emotions such as anxiety in response to the event. Since parental anxiety is frequently transmitted to children via contagion, preadmission assessment of parental perceptions toward a child's impending hospitalization is an important step in improving preadmission programs, promoting parent-child adaptation, and preventing psychological stress.

CHAPTER IV

METHODOLOGY

The purposes of this study were to (a) identify concerns associated with a child's impending hospitalization for surgery that parents consider anxiety-provoking, (b) determine the amount of anxiety experienced by parents prior to their child's admission to the hospital for routine surgery, (c) establish the correlates of parents' anxiety, and (d) identify the type of information parents who have a child scheduled for surgery receive as a matter of standard practice.

An exploratory, descriptive design utilizing both quantitative and qualitative data was chosen because of the paucity of research previously documented in this area. Exploratory descriptive designs are particularly useful when researching topics that have an insufficient or incomplete knowledge base (Brink & Wood, 1978). There are both advantages and disadvantages in utilizing an exploratory descriptive design. The advantages include both the design's flexibility and its usefulness when little is known about the subjects and/or settings. The disadvantages of the design are (a) potential observer bias or selectivity in collecting/analyzing data, (b) possible observer influence or subject reactivity, (c) lack of control over variables since the researcher cannot directly manipulate the independent variable or control extraneous variables as in an experiment, and (d) lack of

reliability/validity of data collection tools due to highly flexible, unstructured procedures for data collection (Gortner, 1982).

Instruments/Tools

The data were collected with three instruments: A Parental Concern Interview Guide (PCIG), a Demographic Collection Sheet, and the State-trait Anxiety Questionnaire (Spielberger, Gorsuch, & Lushene, 1970) (see Appendices A-C).

Parental Concern Interview Guide. The open-ended interview guide was developed from a review of the literature and four pilot interviews. The PCIG contains 15 open-ended questions designed to identify sources of parental anxiety related to their child's impending hospitalization. The face validity of the instrument was determined by two faculty experts through analysis of the data from the four pilot interviews and review of the relevant literature.

Content addressed in the interview included (a) the child's health and safety both during and after hospitalization, (b) rooming-in policies, (c) expected course of hospitalization, (d) family/sibling response toward hospitalization and surgery, (e) home care following discharge, and (f) preparation of child for hospitalization and surgery.

State Anxiety Questionnaire. The State Anxiety Questionnaire is one of two scales of the State-trait Anxiety Inventory (STAI) (Spielberger, Gorsuch, & Lushene, 1970). It is a 20-item state-anxiety scale that measures an individual's situational anxiety at a particular moment in time. It can be used alone or in combination with the 20-item trait-anxiety scale that measures an individual's general proneness to

anxiety. In this study, the state-anxiety questionnaire was administered alone (see Appendix C).

The validity and reliability of the STAI-A scale was determined by testing thousands of college students in a variety of anxiety-provoking situations. For example, a sample of 977 undergraduate college students at Florida State University were first administered the A-state scale with the standard set of instructions and under normal conditions (Norm Condition). They were then asked to rescore the scale based on how they would feel "just prior to the final examination in an important course" (Exam Condition). Results of the study revealed that the mean score for both men and women in the exam condition was considerably higher than in the norm condition (Spielberger, Gorsuch, & Lushene, 1970).

Additional validity data for the STAI-A-State scale were gathered in a single testing session involving 197 undergraduate students at Florida State University under four distinct experimental conditions. The first administration occurred at the start of the testing session (Normal Condition); the second followed a 10-minute relaxation training program (Relax Condition). The students were then given the Terman Concept Mastery Test, which was presented to them as a "relatively easy IQ test" and were interrupted after 10 minutes for the third administration of the scale (Exam Condition). The last administration was given immediately after a stressful movie (Movie Condition) chronicling several accidents in a woodwork shop. Results of the study revealed that the mean score for the A-state scale as well as individual A-state items were lowest in the relax condition and highest after the students viewed the stressful film (Spielberger, Gorsuch, & Lushene, 1970). Results of these and other tests demonstrated that the State

scale has a high degree of internal consistency as measured by alpha reliability coefficients of .83 to .92 (Spielberger, Gorsuch, & Lushene, 1970).

Sample

Criteria for entry. During data collection, parents of children who were prescheduled for surgery were entered into the study. The initial criteria for selection of parents were as follows: (a) have a child aged 3 to 7 years who was prescheduled for a "routine" surgical repair, (b) have not experienced hospitalization of this child within the previous 12 months, and (c) must have the ability to read and speak English. However, during the time interval set for data collection, the number of children scheduled for inpatient surgery were quite small. It therefore became necessary to modify the sample selection criteria (see modifications of sample under Data Collection).

Setting

The study included parents of pediatric surgical candidates prescheduled for surgery at two distinct settings: Children's Hospital Medical Center, Oakland, CA and Kaiser-Permanente Medical Center, Oakland, CA. Children's Hospital Medical Center is a 142-bed children's hospital. The surgical unit is on the fourth floor of the hospital and has 32 beds. In 1983 the hospital provided both inpatient and outpatient surgical services to 2,771 children. Of these children, approximately 50 percent underwent inpatient surgical procedures. The 32-bed inpatient surgical unit is staffed by registered nurses, licensed vocational nurses, respiratory therapists, and child life workers. The

unit policy allows for 24-hour visiting privileges and provides sleeping accommodations for one parent. The playroom, available for all noninfectious children, is supervised by child life workers and a number of volunteers. A preadmission orientation program is provided through the child life workers. The program is designed to give parents and their children a better understanding of the hospital and to allay fears of hospitalization. This goal is accomplished through a slide show, discussion period, and tour of the facility. The staffing pattern promotes continuity of care so that most children are cared for by the same nurses during their hospital stay.

Kaiser-Permanente Medical Center in Oakland is a 340-bed urban medical center, accommodating both children and adult patients. There is a 27-bed pediatric unit consisting of both medical and surgical patients. Similar to Children's Hospital, it is also staffed predominantly by registered nurses, has a 24-hour visiting policy (for one parent only), provides for the physical needs of parents, and has a playroom with trained volunteers. There is no preadmission hospital program available for children and parents, however. In 1983 the hospital provided surgical services to 10,645 adults and children, of which 210 were pediatric inpatients and 517 were pediatric outpatients.

Data Collection

Protection of human subjects. Assurance that the rights of human subjects involved in this study were adequately protected was obtained from the Human Research Committee at the University of California, San Francisco. Informed consent (see Appendix D) was utilized to explain

and guarantee the rights, in addition to the minimal risks associated with participation in this study.

Procedure. Parents were admitted to the study by one of two mechanisms. The instruments were administered either in the parents' homes or in the conference room of the hospital. Instrument administration ranged from 72 hours prior to admission up to and including the morning of admission to the hospital. Only those parents who were unreachable by phone prior to the admission of their child for surgery were interviewed at the hospital on the morning of admission.

In all instances, throughout the interview procedure parents were encouraged to speak freely. Responses were tape-recorded and transcribed. The tapes were destroyed following transcription.

The sequence of tool administration was as follows for all subjects: Demographic Collection Sheet, State Anxiety Questionnaire, and Parental Concern Interview Guide. This sequence remained constant throughout the study.

Modifications. In order to secure a suitable sample population for study, the original criteria for entry were modified as follows: (a) have a child aged 7 months to 17 years who was prescheduled for a "routine" surgical repair, (b) have not experienced surgery on this child within the past six months, (c) have the ability to read and speak English.

Modifications of the criteria for entry into the study became necessary as a result of a recent trend in the health-care field to perform a number of routine surgeries on an outpatient basis. Consequently, the number of children admitted to the hospital for routine inpatient surgery has been steadily declining over the past few years.

Data Analysis

Interview data were subjected to constant comparative analysis (Glaser & Strauss, 1967). In the pilot interviews the raw data were critically analyzed, observing for items which addressed the problem under study. Transcription of subsequent interviews resulted in the coding of data into substantive categories. Further analysis of data resulted in the reduction and generalization of interrelated categories into the final six preadmission parental themes.

Data generated by the Spielberger (1970) State-Anxiety Questionnaire were subjected to descriptive statistics (mean, mode, and standard deviation). Trends for relationships within the parental response group were also noted. Additionally, relationships between (a) anxiety and the mother's marital status, (b) anxiety and the mother's educational level, (c) anxiety and maternal ethnicity, (d) anxiety and the child's age, (e) anxiety and the child's birth order, and (f) anxiety and the type of surgery experienced by the child were analyzed by the Mann-Whitney U-test, the Kruskal-Wallis test, and Spearman's rho.

CHAPTER V

RESULTS

Introduction

This pilot study sought to (a) identify concerns associated with a child's impending hospitalization for surgery that parents consider to be anxiety-provoking, (b) determine the amount of anxiety experienced by parents prior to their child's admission to the hospital for routine surgery, (c) establish correlates of parental anxiety, and (d) identify the type of information parents who have a child scheduled for routine surgery receive as a matter of standard practice. The data obtained during instrument administration were analyzed as follows. Parental responses generated by the Parental Concern Interview Guide were analyzed for thematic relationships via constant comparative analysis. In addition, data obtained from the State Anxiety Questionnaire were subjected to descriptive statistical analysis.

Sample Characteristics

The sample population was comprised of 23 individual parents: 15 mothers and eight fathers, including seven mother-father pairs. Seventeen of the 23 parents met the modified criteria for entry into the study, that is, parents were referred to the researcher by the medical secretary of three general pediatric surgeons following the

prescheduling of their child for surgery in an inpatient hospital setting. Parents were invited to enter the study by telephone. During this telephone conversation, the researcher explained the purpose of the study and length of time of the interview. An appointment to administer the instruments in the home during the week prior to surgery was also made. Assurance of confidentiality and anonymity was also given (Mechanism #1).

Six of the 23 parents could not be reached by phone prior to the admission of their child for surgery. Two of the families had no phone. Consequently, these subjects were invited to enter the study the morning their child was admitted to the hospital. After admission, the purpose of the study and the length of the interview/questionnaire were explained. Assurance of confidentiality and anonymity was provided. After the consent form was signed, the tools were administered in a hospital conference room. No parent refused consent (Mechanism #2).

Maternal demographic data. The total sample of 15 mothers presented the following characteristics. Nine mothers were married, three were divorced, two were separated, and one was single. Their ages ranged from 18 years to 51 years, with a mean age of 31 years. Their occupations included management (n=1), office worker (n=3), teacher (n=1), housewife (n=6), and unemployed (n=4). The highest educational level for the majority of mothers was the twelfth grade (high school graduate). However, educational levels for all mothers ranged from the tenth grade to a bachelor's degree.

Paternal demographic data. The total sample of eight fathers presented the following characteristics. Seven fathers were married and one was divorced. Their ages ranged from 25 years to 52 years, with a

mean age of 37.1 years. Their occupations included manual labor/blue collar (n=3), management/white collar (n=2), self-employed business man (n=1), pharmacist (n=1), and engineer (n=1). Their mean educational level was 2.8 (2 = some college and 3 = an Associate of Arts degree). The educational levels ranged from high school diploma to doctoral degree.

Child demographic data. The sample of children included six females and ten males. Ordinal birth positions included the following: three were only children, nine were youngest, and four were first-born. Their ages ranged from 7 months to 17 years. The mean age was 4.7 years. A more homogeneous age group was not possible to obtain due to a significant drop in the number of children experiencing routine surgery on an inpatient versus an outpatient basis.

In addition, 14 children had had previous hospitalizations, while two children had never been hospitalized. The mean number of hospitalization per child was 2.3, with a range of 0 to greater than 9. Eight had had previous surgery. The types of surgical procedures performed during this present study varied (see Table 1). Fifteen of the children were hospitalized on the fourth-floor surgical unit at Children's Hospital Medical Center in Oakland, CA. The sixteenth child was hospitalized at Kaiser-Permanente Medical Center in Oakland, CA.

Family Constellation

The household structure ranged in size from two to six family members. Two families had two members, six families had three members, six families had four members, one family had five members, and one family had six members. The mean number of siblings per child

undergoing surgery was 1.1 with a range of 0 to 3. The ages of these siblings ranged from 1 to 28 years with a mean age of 7.6 years.

TABLE 1
Summary of Type of Surgery and Frequency
Performed on Sample Population
(n = 16)

Type of Surgery	Number of Children
Lung Biopsy	1
Kidney Biopsy	1
Thyroid Biopsy	1
Spleenectomy	1
Bronchoscopy	1
Gastroscopy	1
Hernia	2
Genital	2
Small/Large Bowel Repair	6

Analysis of Interview Data

Parental responses to the open-ended interview guide were analyzed via constant comparative analysis. The themes which emerged during data analysis as being most reflective of parental perceptions during the preadmission period will be discussed. These include (a) preadmission parental concerns, (b) parent-child response to impending hospitalization, and (c) mediators of parental anxiety.

Preadmission Parental Concerns

Potential for normalcy. Eighteen of the 23 parents interviewed (78%) expressed concern over the anticipated physical findings associated with their child's impending hospitalization. Questions such as What is the possibility of malignancy? What effect will the surgery have on my child's sperm-count and ability to fertilize an egg? and What effect will the surgery have on my child's ability to lead a normal life? were commonly expressed.

Among these parents, 11 (61%) were particularly anxious about the possibility of the child becoming or remaining chronically ill. In other words, they questioned whether the child's health would return to normal or would mark the beginning of a life-long illness.

In addition, seven parents (39%) were uneasy about the side-effects and/or physical complications associated with surgery. Commonly voiced concerns dealt with the potential hazards of anesthesia and the amount of pain the child might experience.

Physical pain. Fifteen of the 23 parents interviewed (65%) stated that the amount of physical pain that the child might experience was a major source of worry. This worry stemmed from parental uncertainty over the child's ability to effectively cope with postoperative discomfort. Surprisingly, this was of greater concern to fathers, in that six out of the eight (75%) considered this to be a significant issue during the course of the interview.

Risk of anesthesia. Twelve of the 23 parents interviewed (52%) stated that the potential risk from anesthesia during the surgical procedure was a major source of worry and concern. Parents attributed much of their anxiety to their own experience with anesthesia induction,

their child's previous experience with it, and horror stories from family and friends.

Separation anxiety. Sixteen of the 23 parents (70%) interviewed expressed anxiety over the prospect of leaving their child alone in the hospital with unfamiliar caretakers. Some of the reasons given by parents which contributed to their anxiety included (a) fears that the child would be neglected by hospital personnel, (b) uncertainty over their child's ability to handle the separation, and (c) uncertainty over their own ability to handle the separation. Surprisingly enough, only three (19%) of the 16 parents concerned about leaving the child alone in the hospital were planning to stay overnight with the child, even though hospital policy made this possible.

Among the seven parents who were not anxious about this issue, three had had previous experience with their child being hospitalized and two were already planning on spending the night.

Effect of hospitalization. Seventeen of the 23 parents interviewed (74%) were concerned about the effect that hospitalization and surgery would have on the child. Among these parents, approximately 70 percent were worried about the immediate, short-term effects such as the child's ability to cope with the emotional strain of hospitalization and surgery, in addition to the child's ability to cope with the pain and discomfort associated with hospital procedures.

The remainder of these parents (30%) were more focused on the long-term effects of hospitalization which included the child's future attitude toward doctors and health institutions, in addition to the child's own concept of individual health and wellness.

Preadmission education. Eleven out of the 23 parents interviewed (48%) were offered detailed explanations outlining the child's need for surgery, the projected success rate of the operation, and the specifics of the surgical procedure including diet specifications, operating room time, type of anesthesia, and the child's postoperative physical condition. Among the majority (52%) of parents who received a minimal amount of information, only one-half expressed dissatisfaction.

Parent-Child Response

Children's behavior changes. Ten out of the 23 parents believed that there was a noticeable change in their child's behavior during the preadmission week. These behavior changes included increased crying, stubbornness, preoccupation with self, and depression-like symptoms. Five of the seven children exhibiting these behaviors were 3 years of age or older. Conversely, six of the nine children who did not exhibit any noticeable changes were less than 3 years of age. Furthermore, seven of the nine children who did not exhibit behavior changes had been informed of the upcoming hospitalization by their parents prior to the interview.

Parent behavior changes. Parental response to the behaviors and needs of their children during the preadmission period varied. Ten out of 23 parents (61%) felt a strong urge to both protect and nurture the child. This need to protect and nurture the child was evidenced by an increased desire for emotional and physical proximity. Mothers, in particular, expressed a wish to spend more time with their children, be more physically responsive to them, and to spare them any further tension or discomfort. Additionally, nine out of 23 parents

(39%) spoke of a tendency to be more indulgent or lenient with their children.

Mediators of Anxiety

Further analysis of the data suggested that there were two mediators of parental anxiety. These mediators included the parents' previous experience with hospitalization and the amount of preoperative information received.

Past experience. A parent's previous experience with a child's hospitalization, including positive interactions with physicians and nurses, seemed to mediate parental anxiety levels. For example, 14 out of 23 parents (61%) interviewed thought that their past experience with a child's hospitalization helped to decrease their present anxiety. Additionally, six parents believed that previous interactions with health professionals were important in reducing anxiety.

Preadmission education. Twenty out of 23 parents interviewed (87%) thought that, as a rule, the receipt of preoperative information served to decrease anxiety by (a) preparing them for the surgical event, (b) increasing their understanding of the illness and procedure, and (c) fostering a sense of relief. Unfortunately, only 48 percent of the families interviewed reported receiving really in-depth explanations of the need for surgery and the procedures entailed in the process. Furthermore, of the 15 parents whose children were to be admitted to Children's Hospital Medical Center in Oakland, only two (13%) received Children's preadmission booklet from the doctor's office or hospital prior to admission.

Analysis of Anxiety Scores

Parental scores on Spielberger's (1970) STAI A-state scale were subjected to descriptive statistical analysis. Two separate normative sample scores were used in determining the degree of anxiety experienced by mothers and fathers. Since normative data for the STAI (Form X) are available for a large sample of college freshmen, undergraduate college students, and high school students, the mean educational levels of both mothers and fathers were used to determine the normative group most appropriate for comparison. As a result, mothers' scores were compared to the normative scores of female college freshmen and fathers' scores were compared to male undergraduate students. The mean score for normative anxiety levels in female college freshmen was 39.39 with a standard deviation of 8.62. The mean score for normative anxiety levels in male undergraduates was 36.35 with a standard deviation of 9.67. These scores were then used as a reference point in setting the range for "normal" anxiety responders in the parent population. Parents were separated by standard deviations into four categories: (a) low anxiety responders, (b) normal anxiety responders, (c) moderate anxiety responders, and (d) high anxiety responders.

Mothers' anxiety scores. Mothers were considered to be normal anxiety responders if their mean score range on the STAI A-state scale was between 30.77 and 48.01 (normative score $\pm$ one standard deviation). Mothers were considered low anxiety responders if their mean score range was less than 30.77 (less than one standard deviation below the mean). They were classified as moderate anxiety responders if their mean score range was between 48.01 and 56.63 (greater than one standard deviation above the mean). Lastly, mothers were classified as high anxiety

responders if their mean score range was greater than 56.63 (greater than two standard deviations above the mean).

Analysis of the mean scores of all 15 mothers showed that none were classified as low anxiety level responders; eight were normal anxiety level responders, three were moderate anxiety level responders, and four were high anxiety level responders. The overall mean anxiety score for all 15 mothers was 49.3 with a standard deviation of 11.22 (see Table 2).

Fathers' anxiety scores. Fathers were considered to be normal anxiety responders if their mean score on the A-state scale was 26.68 to 46.02 (normative score $\pm$ one standard deviation), low anxiety responders if their mean score was less than 26.68 (less than one standard deviation below the mean), moderate anxiety responders if their mean score was between 46.02 and 55.69 (greater than one standard deviation above the mean), and high anxiety responders if their mean score was greater than 55.69 (greater than two standard deviations above the mean).

The mean scores of all eight fathers indicated that five fathers were classified as being normal anxiety responders and three were classified as moderate anxiety responders. The overall mean score for all eight fathers was 40.2 with a standard deviation of 9.39 (see Table 2). This score was considerably lower than the overall mean anxiety score of mothers.

TABLE 2

Frequency Distributions of Mothers' and Fathers'
Total Anxiety Scores on the STAI A-State Scale

For Entire Population of Mothers (n=15)

Anxiety Category	$\bar{X}$	SD	n
Low Responder	-	-	0
Normal Responder	40.8	5.4	8
Moderate Responder	51.7	2.5	3
High Responder	64.5	2.6	4

For Entire Population of Fathers (n=8)

Anxiety Category	$\bar{X}$	SD	n
Low Responder	-	-	0
Normal Responder	34.6	6.5	5
Moderate Responder	49.6	3.0	3
High Responder	-	-	0

Correlates of Parental Anxiety

Correlates of parental anxiety were explored. However, because of the small sample of fathers, nonparametric testing for statistical significance was limited to the anxiety scores of mothers alone. Tests for differences and associations were utilized in analyzing these scores. The following differences in maternal anxiety levels were tested and analyzed for statistical significance using the Mann-Whitney

U-test and the Kruskal-Wallis test: (a) maternal anxiety and marital status, (b) maternal anxiety and ethnicity, and (c) maternal anxiety and the child's birth order.

Anxiety and marital status. The anxiety scores for married (9) versus nonmarried (6) (single, divorced, separated) mothers were analyzed. Results indicated that the mean anxiety score in nonmarried women was higher ($\bar{X} = 52.3$, $SD = 11.37$) than for married women ($\bar{X} = 47.2$, $SD = 11.3$). However, analysis of the data by the nonparametric Mann-Whitney U-test revealed that there was no significant statistical difference between the anxiety scores of married versus nonmarried mothers ($z = -.94$, $p = .34$).

Anxiety and ethnicity. Due to the large number of Caucasians in the sample population of mothers (9), statistical means were computed for Caucasians versus Others (Blacks, Asians, and Mexican-American). The mean anxiety score for Caucasian mothers was 47.4 where the mean score for Others was 52.5. However, analysis of the data by the Mann-Whitney U-test revealed no significant statistical difference between the anxiety scores of Caucasian versus Other mothers ($z = -.47$, $p = .63$).

Anxiety and birth order. The anxiety scores of mothers in relation to a child's birth order were analyzed. Results indicated that the mean anxiety score of mother with an only child was highest ($\bar{X} = 53.3$, $SD = 11.9$). Next highest was the score of mothers whose youngest child was scheduled for surgery ($\bar{X} = 50.3$, $SD = 12.5$). Lastly, mothers whose oldest child was scheduled for surgery had the lowest mean anxiety score ($\bar{X} = 44$, $SD = 8.4$). However, analysis of the data by the Kruskal-Wallis test revealed that there was no significant statistical

difference between maternal anxiety scores and a child's birth order ($H = 1.05$, $p = .59$).

The following associations in maternal anxiety levels were tested and analyzed for statistical significance using the Spearman rho test: (a) maternal anxiety and the child's age, (b) maternal anxiety and educational level, and (c) maternal anxiety and the number of hospitalizations.

Anxiety and child's age. The Spearman rank-order correlation coefficient was utilized in order to test for association between maternal anxiety scores and the age of the child. Results of the test indicated that there was a moderately significant inverse correlation between these two variables ($r = -.48$, $p = .07$).

Anxiety and educational level. Analysis by the Spearman rank-order correlation coefficient found that there was no significant statistical association between maternal anxiety scores and level of education ($r = -.40$, $p = .14$).

Anxiety and number of hospitalizations. Analysis by the Spearman rank-order correlation coefficient found that there was no significant statistical association between maternal anxiety scores and the number of previous hospitalizations of the child ($r = -.03$, $p = .93$).

Additional Descriptive Statistics

Anxiety and type of surgery. Due to the large number of children experiencing intestinal/bowel surgery (6), the anxiety levels of mothers whose children were undergoing this surgical procedure were compared with all others. The mean anxiety score for those mothers facing

intestinal surgery on their child was 59 in comparison to 43 for the mothers of all other types of surgical candidates.

Anxiety and interview environment. Lastly, in light of the fact that five of the 16 interviews were held on the morning of admission to the hospital, the mean anxiety scores of the mothers interviewed in the home were compared with the anxiety scores of those mothers interviewed in the hospital. The mean score of "hospital" mothers was 47.4 with a standard deviation of 11.61 in comparison to 50.5 with a standard deviation of 11.88 for mothers interviewed in the home.

Future Analysis

Future analysis of the data is limited by the small sample size. Although descriptive statistical analysis suggested that there may be a relationship between maternal anxiety levels and a number of the variables listed, there is no statistical power to prove this claim. Consequently, these differences may be attributed to chance alone. In light of this fact, further analysis would be contraindicated without a larger sample population.

CHAPTER VI

DISCUSSION

Introduction

This study proposed to examine parental responses during the period prior to a child's hospital admission for a surgical procedure. More specifically, the study sought to determine the amount of anxiety experienced by parents during the preadmission week and to identify their needs and concerns. A summary of the significant findings is included below.

Significance

In general, study results suggest that mothers experience preadmission anxiety more often and to a greater degree than fathers. Secondly, maternal anxiety (as evidenced by the mean anxiety scores on the STAI A-State Scale) were greatest in mothers who were single, less educated, and non-White. Thirdly, maternal anxiety levels were highest when impending hospitalization involved the only or youngest child. Lastly, both mothers and fathers were able to identify six predominant parental concerns contributing to preadmission anxiety: (a) potential for normalcy, (b) physical pain, (c) risk of anesthesia, (d) separation anxiety, (e) effect of hospitalization, and (f) preadmission education.

Overall, parents were particularly concerned about the physical outcomes associated with their child's impending hospitalization for surgery and wondered what affect these outcomes might have on the child's present and future life. Immediate short-term parental concerns were (a) the amount of physical discomfort the child would experience, (b) the degree of emotional trauma the child would experience, (c) the potential complications associated with surgery, and (d) the potential risks of anesthesia.

Long-range parental concerns included preoccupation with the child's future state of health following surgery. In general, parents wondered whether hospitalization and surgery would result in normalization of the child's condition or mark the beginning of chronic disease. Additionally, parents worried about their child's subsequent attitude toward doctors, hospitals, and personal wellness.

Parent-child behavior changes were identified during the preadmission week. Both mothers and fathers noticed their children to be more tearful, more preoccupied, more stubborn, and somewhat depressed. These behavioral manifestations were particularly evident in children three years of age or older. Anecdotal reports suggested that behavioral changes were not influenced by whether or not children were informed of impending hospitalization and surgery.

Parents noted behavioral changes in themselves as well. These changes were manifested by a strong desire to protect, nurture, and indulge the child. Mothers, especially, felt a powerful need to maintain close physical contact.

Generally speaking, preadmission parental anxiety was found to be influenced by two factors: previous hospital experiences and the

thoroughness of the preadmission preparation. Previous positive experiences with children's hospitalizations appeared to decrease parental anxiety. In addition, preadmission education by the physician also served to mediate parental anxiety. However, despite the importance of preadmission preparation in mediating parental anxiety, only about one-half of the families in this study received preadmission information from any source. Furthermore, preparatory booklets designed by Children's Hospital to provide helpful information to parents and children facing hospitalization and surgery were sent to only two of the 15 eligible families in the study. This finding suggests that teaching materials available through the hospital and designed to prepare children and parents for hospitalization and surgery are not being utilized.

Limitations

The major limitations in this pilot study were (a) the small sample size, which limited testing for statistical significance and precludes generalizability of the study's results to a larger population, (b) the use of nonprobability convenience sampling, which introduced the risk of selection bias and also prevents generalizability to a larger population, and (c) the potential threat of contemporary history and interaction effects that may have biased the study results.

Because this research was undertaken as a pilot study, the researcher was allowed broader flexibility in the study design (Polit & Hungler, 1978). As a consequence, study variables that might have acted as limitations in a larger study served to strengthen the researcher's findings and lend important direction to future research. For example,

heterogeneity in the sample suggested several correlations between parental anxiety levels and other factors such as marital status, ethnicity, educational level, and the child's age. Future research should be assigned to investigate the strength of these relationships.

Although the decision to interview parents in two separate settings (home versus hospital) may have introduced variables that influenced the data, variability in the setting led to three important observations. First, the mean anxiety scores were higher for mothers interviewed at home (home $\bar{X}$ = 50.5, hospital $\bar{X}$ = 47.4). Second, parents were more easily distracted by persons and events at home. Third, parents were often hesitant to verbalize their fears and concerns when interviewed at home in the presence of their children. Hospital interviews, on the other hand, may also have been influenced by parental anxiety levels. According to Meng and Zastowny (1982), parental anxiety levels peak on the day of admission to the hospital. Therefore future studies need to explore optimal conditions and settings for eliciting parental concerns and preparing the family for the hospital experience.

One final limitation not previously discussed concerned the omission of the STAI A-Trait Scale as a measure of parental anxiety. The decision to use the A-State Scale alone, without subsequent administration of the A-Trait Scale, may have prejudiced interpretation of the study results. Without trait anxiety scores, it cannot be determined whether individual parents were anxious over the actual perceived threat of surgery or were inherently predisposed to increased anxiety. Therefore administration of both scales is advisable for future studies.

Implications for Nursing.

Results of this pilot study indicated that parents as well as children have needs and concerns during the preadmission week. Consequently, preadmission programs for children need to address the concerns of parents as well as children. In addition, because high anxiety levels preclude learning, it is crucial that preadmission programs for parents (particularly mothers) and children be conducted before anxiety reaches peak levels (Meng & Zastowny, 1982). Therefore preadmission programs should be initiated early and incorporated into routine preoperative care. In developing and implementing these programs, sufficient time needs to be allotted for a general exploration of individual parental concerns and identification of anticipated problem areas.

Since less than one-half of the parents interviewed in this study received comprehensive teaching and preparation from physicians, nurses may need to assume a more active role in preoperative preparation of parents and children. More specifically, nurses could develop written guidelines jointly with other health professionals, delineating the medical, physical, and psychological management of specific types of surgical procedures. Following initial preparation, nurses could then reinforce physician instruction within these guidelines, assess parental comprehension, and intervene if needed. On admission, nurses could conduct a follow-up visit to determine if the family has any additional questions and concerns.

Finally, nurses and other health professionals might focus on preparing families whose familial characteristics may increase anxiety response and cause unfounded concerns. For instance, in this particular

study it was shown that maternal anxiety levels could be influenced by marital status, ethnicity, child's birth order, and the type of surgical procedure performed.

Recommendations for Future Research

This study indicates the need for additional research in the following areas: (a) patterns of preadmission parent-child anxiety levels, (b) correlates of preadmission parental anxiety levels, (c) the relationship between preadmission parental anxiety levels, emergent parental concerns, and familial characteristics, and (d) analysis of the effects of a parent-child preadmission program on concerns and anxiety levels.

Preadmission parent-child anxiety. Future investigations could explore preadmission anxiety levels in both parents and children using a larger, more homogeneous sample. A time-series design using a randomized control group could be devised whereby parent-child anxiety levels could be measured over the entire preadmission week. Peak periods in familial anxiety levels could then be identified. Such information would be very useful to health-care professionals in determining the most appropriate time to implement a preadmission educational program for optimal learning and adaptation.

Correlates of preadmission parental anxiety. It is proposed that future research explore the relationship between preadmission parental anxiety levels and existent familial characteristics such as marital status, ethnicity, educational level, birth order/age of child, child state-trait anxiety, and type of surgical repair, using a larger, more homogeneous sample.

Parental Anxiety, parental concerns, and familial characteristics.

Future research needs to explore the themes identified in the study using a larger, more homogeneous sample. In addition, the relationship between parental anxiety, emergent parental concerns, and existent familial characteristics could be examined. More specifically, parental concerns could be analyzed for similarities and differences among designated anxiety response groups (low, normal, moderate, and high anxiety responders) and existent familial characteristics. Such an investigation could lead to the successful classification of parental needs and concerns on the basis of anxiety scores and/or demographic data.

Parent-child preadmission programs. Finally, future investigations could utilize findings from these proposed studies to develop a revised preadmission program for both parents and children, using an experimental design. Families could then be tested for anxiety response, physical and psychological adaptation, and recovery time at specific time periods during the course of hospitalization following participation in such a program.

Summary. Proposed research questions for future study are:

1. When does preadmission anxiety begin and peak for parents and their children?
2. What is the relationship between parent/child anxiety levels and selected familial characteristics?
3. What is the relationship between parent/child anxiety levels and type of surgery?
4. What is the relationship between peak preadmission anxiety levels and type of parental concerns?

5. What is the effect of a revised parent/child preadmission program on parent/child anxiety and adaptation during hospitalization?

In essence, the above proposed research questions are designed to enhance parent-child adaptation to hospitalization in the future by: (a) identifying the needs and concerns of parents during the preadmission period, (b) determining optimal conditions under which preadmission learning occurs, (c) identifying families who are at greatest risk for increased anxiety response throughout the course of hospitalization, and (d) implementing and evaluating effective parent-child preadmission orientation programs.

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APPENDIX A

INTERVIEW GUIDE

Interview Guide

1. Tell me about your feelings concerning your child's upcoming hospitalization for surgery.
2. What additional concerns have you had in relationship to this event?
3. In what way(s) has your past experience with hospitalization helped to decrease your present anxiety?
4. In what way(s) has it helped to increase it?
5. What steps have you taken to prepare your child for this upcoming hospitalization and surgery?
6. What steps have you taken to prepare yourself for this event?
7. What information have you been given about your child's upcoming hospitalization and surgery?
8. In what way, if at all, has this information been helpful to you and your child?
9. In what way, if at all, has it not been so helpful?
10. Some parents have expressed anxiety over:
 - leaving the child alone in the hospital.
 - the effect hospitalization will have on other siblings and/or family members.
 - the effect this hospitalization and surgery will have on the child.
 - the outcomes of the child's illness and surgery.
 - ability to take care of the child at home, upon discharge.

- the amount of physical pain the child may experience.
- the potential risks of anesthesia during the surgical procedure.

11. Has your child's behavior changed since being told of his/her upcoming hospitalization? In what way?
12. How are you dealing with the changes that are occurring?
13. How has this upcoming hospitalization and surgery affected your response to your child's needs?
14. To the needs of the rest of the family members?
15. Did you receive an admission booklet from the Doctor's Office or Children's Hospital explaining the hospital routine, policies, etc?

APPENDIX B

BACKGROUND FACT SHEET

Background Fact Sheet

Interviewer _____ Date _____

Code # _____ Relationship to Child _____

Address _____ Phone No _____

Parent(s)

Child

1. Age: Father _____
Mother _____

1. Birth Date _____

2. S M D Sep or W
(Circle & give date)

2. Grade in School _____

Special School _____

3. Educational Level:

Father _____

Mother _____

3. Type of Surgery _____

4. Hospitalizations (date, reason)

4. Occupation:

Father _____

Mother _____

5. Birth Order (Circle)

Only Youngest Middle Oldest

5. Religion (Circle):

Father: Catholic Protestant Jewish Other

Mother: Catholic Protestant Jewish Other

6. Siblings (Names, birthdays, sex)

7. Ethnic Background (Circle):

Father: Asian Black Caucasian Mexican-American Other

Mother: Asian Black Caucasian Mexican-American Other

8. Other Family Illnesses:

Father _____

Mother _____

Children _____

APPENDIX C

SELF-EVALUATION QUESTIONNAIRE

Self-Evaluation Questionnaire

Developed by C.F. Spielberger, R.L. Gorsuch, and R. Lushene

STAI Form X-1

Interviewee Code # _____ Date _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement, but give the answer which seems to describe your present feelings best.

1 - Not at all 2 - Somewhat 3 - Moderately so 4 - Very much so

- | | | | | |
|--|---|---|---|---|
| 1. I feel calm | 1 | 2 | 3 | 4 |
| 2. I feel secure | 1 | 2 | 3 | 4 |
| 3. I am tense | 1 | 2 | 3 | 4 |
| 4. I am regretful | 1 | 2 | 3 | 4 |
| 5. I feel at ease | 1 | 2 | 3 | 4 |
| 6. I feel upset | 1 | 2 | 3 | 4 |
| 7. I am presently worrying over possible misfortunes . . . | 1 | 2 | 3 | 4 |
| 8. I feel rested | 1 | 2 | 3 | 4 |
| 9. I feel anxious | 1 | 2 | 3 | 4 |
| 10. I feel comfortable | 1 | 2 | 3 | 4 |
| 11. I feel self-confident | 1 | 2 | 3 | 4 |
| 12. I feel nervous | 1 | 2 | 3 | 4 |
| 13. I am jittery | 1 | 2 | 3 | 4 |

14. I feel "high strung" 1 2 3 4
15. I am relaxed 1 2 3 4
16. I feel content 1 2 3 4
17. I am worried 1 2 3 4
18. I feel over-excited and "rattled" 1 2 3 4
19. I feel joyful 1 2 3 4
20. I feel pleasant 1 2 3 4

APPENDIX D

CONSENT FORM

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Consent to Participate in Research

Christine M. Kinavey is a graduate nursing student at the University of California, San Francisco. She is studying how parents feel about the impending hospitalization of their child for routine surgery. Since our child will soon have surgery, she has invited our participation.

If we agree, she will interview us and have us fill out a short questionnaire prior to our child's hospitalization. This will take approximately one hour and will be in our home. The interview will be tape-recorded.

Both the interview and the questionnaire will be as confidential as is possible. The tape will be erased after it is transcribed, and code numbers will be used on all forms.

The potential risk to us in participation in this study is that some of the questions in the questionnaire or interview may make us uncomfortable or upset. If this should happen, we can refuse to answer any questions or stop and talk about it.

Although this study will result in no direct benefit to us or our child, the knowledge gained may affect future decisions on the initiation of preadmission programs for parents of children scheduled for surgery.

If we have any questions now, we can talk to Ms. Kinavey. For questions later, we can call Ms. Kinavey at (415) 635-8361. If we have any problems or objections we may call the committee that is concerned with protection of research participants. Their phone number is (415) 666-1814.

Participation in research is voluntary. We are free to refuse to be in the study or withdraw from the study at any time. Our refusal to participate will not jeopardize our child's medical care in any way.

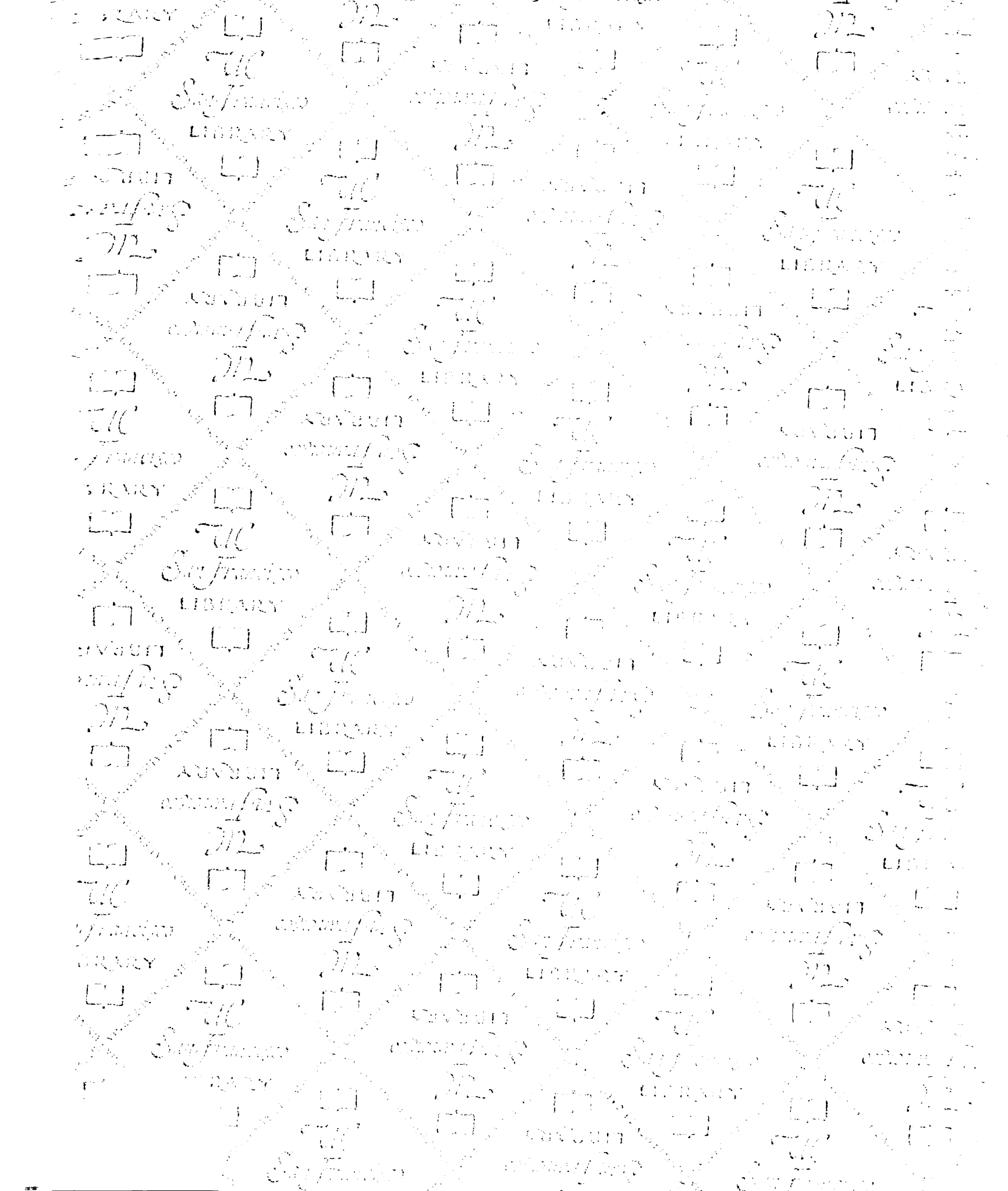
We have been given a copy of this form to keep. If we wish to participate, we should sign this form.

Date

Mother's Signature

Date

Father's Signature



FOR REFERENCE

NOT TO BE TAKEN FROM THE ROOM



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