

ROLE ADEQUACY OF PEDIATRIC OUTPATIENTS
UNDERGOING SURGERY

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Dedicated to
Jack and Katherine
who endured

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CHAPTER 1

INTRODUCTION

Outpatient or day surgery is achieving popularity as a method of utilizing hospital facilities without incurring the costs of an inpatient admission. It provides the client with skilled medical treatment and nursing care during a period of optimal need and allows the resumption of self-care within a relatively short period of time. Several authors (Bartlett, Battit, Rockett, Perry, & Austin, 1979; Cohen, Keneally, Black, Gaffney, & Johnson, 1980; Davis, 1974) reported that outpatient surgery has been received with enthusiasm by the hospital staff and that few surgical cases suffer complications.

Steward (1975), in addition to citing the advantages of reduced costs and reduced incidence of nosocomial infection, further suggested that children experienced less emotional disturbances from outpatient surgery than when admitted to the hospital. Shah, Robinson, Kinnis, and Davenport (1972) reported that parents held positive attitudes toward outpatient surgery for their children, and Ahlgren (1973) noted wide acceptance of that type of program by parents and children alike.

With the increasingly wide acceptance of outpatient surgery, the nurse is faced with the dilemma of having limited opportunity to prepare the patient for surgery. Many studies (Mahaffy, 1965; Skipper &

Leonard, 1968; Visintainer & Wolfer, 1975; Wolfer & Visintainer, 1975) emphasized the importance of psychological preparation to decrease stress in hospitalized children and their parents, and several mentioned the nurse's role in information giving to the family the night prior to surgery. Outpatients do not arrive at the hospital until shortly before the scheduled surgery, but data revealing when these patients receive role preparation are lacking.

There is limited opportunity for pediatric outpatients and their mothers to obtain knowledge to promote role adequacy in the child during the outpatient experience. Thus, in an effort to provide role cues for pediatric outpatients, a group role play program was designed. Is it possible for children to learn the expectations of the pediatric outpatient role through attendance at such a program? Do the children who attend a group role play program maintain a greater degree of role adequacy as evidenced in posthospitalization behavior than those children who do not attend a group role play program? Do their mothers feel less anxious on the day of the children's surgery than the mothers who do not attend a group role play program with their children? Do children whose mothers are less anxious on the day of surgery have a greater degree of role adequacy than those children whose mothers experience the greater anxiety? In an attempt to answer the posed questions, this study was formulated.

Problem of Study

The problem of this study was to determine whether or not a significant difference in role adequacy exists between pediatric outpatients who attend a group role play program and pediatric outpatients who do not attend a group role play program with age and gender of the child and the mother's state anxiety level controlled. In addition, the problem was to determine whether or not a significant difference in state anxiety exists between mothers who attend a group role play program with their children and mothers who do not attend a group role play program with their children with trait anxiety of the mother and age and gender of the child controlled.

Justification of the Problem

Hospitalization has often been cited as a stressful experience for the child (Goslin, 1978; Kakkanatt & Gnus, 1980; Skipper & Leonard, 1968). Therefore, if the child has surgery as an outpatient, some of the stress associated with hospitalization such as separation from parents may be minimized. However, the child and the mother are exposed to many unfamiliar stimuli in a very short period of time with very little opportunity to learn new role expectations. The child may be fearful and may demonstrate clinging or regressive behavior; while the mother may be blaming herself for not protecting the child (Hardgrove & Dawson, 1972). The mother influences the child's behavior, and if she is anxious, her ability to help the child is reduced. If she remains calm and relaxed, she is better able to

facilitate the child's adaptation to the situation (Skipper & Leonard, 1968). Several authors have stressed the importance of preparing children for medical or nursing procedures and of providing parents with adequate information (Freiberg, 1972; Mahaffy, 1965; Scahill, 1969; Skipper & Leonard, 1968). Thus, a role play program incorporating both information-giving and role modeling opportunities could provide role cues to the child and the mother who seek assistance in role adequacy. An effective role play program could be as important in the care of the child and the mother as history-taking, administration of medications, or any of the other well-established nursing procedures.

Theoretical Framework

Role, according to the Roy Adaptation Model of Nursing, is defined as "the functioning unit of our society; it defines the expected behaviors that a person should perform to maintain a title" (Roy & Roberts, 1981, p. 260). These role behaviors always occur in a dyadic relationship.

An individual achieves or acquires numerous roles throughout a lifetime and can occupy more than one role at any given time. According to Sarbin and Allen (1968), if role expectations are unclear and ambiguous, then performance in that role will be ineffective and unsatisfying. Role ambiguity occurs when individuals lack clear information regarding expectations of the role and methods of performing the role (Hardy, 1978; Sell, Brief, & Schuler, 1981). This event is usually due to changes occurring in the role but can also

result when a person undergoes role transition from one role to another as is experienced, for example, when a person changes employment or becomes a parent. To prevent role strain or to ease the adjustment period, anticipatory socialization or the process by which the new expectations are learned would decrease the amount of role strain experienced (Roy & Roberts, 1981).

Through the use of the Roy Adaptation Model of Nursing, the nurse is encouraged to provide role cues designed to promote anticipatory socialization. The concept of adaptation has been derived from physiology and suggests that all activities of the organism are aids in adapting to environmental influences (Helson, 1964). "Furthermore, stimuli do not act singly" (Helson, p. 37). Helson stated that adaptation is not static but is always changing, always a dynamic process.

The Roy Adaptation Model of Nursing (Roy & Roberts, 1981) is viewed from the context of Helson's definition. According to Roy and Roberts, the three essential elements of the nursing model are the person, the goal, and nursing intervention. The person is seen as an adaptive system involving input from the self and from the external environment. The input consists of focal stimuli or stressors to which the individual must make an adaptive response. Mediating factors are contextual stimuli which represent all other stimuli present in the situation. They may be physical or social, internal or external, and they may vary in intensity. Also present are residual stimuli which are contributory to the focal stimuli; however, their effect on the

situation is presumed but may or may not be validated. Examples of residual stimuli are beliefs and experiences.

The adaptation level of the individual is determined by the combined effects of the focal, contextual, and residual stimuli and "represents the person's own standard of the range of stimuli that he will tolerate with ordinary adaptive responses" (Roy & Roberts, 1981, p. 43). Adaptive responses are those output which aid the person to maintain well-being; ineffective responses do not aid the person (Figure 1).

Two internal processes or subsystems, which are methods of adapting, are the regulator and cognator. These mechanisms act in relation to the four adaptive modes which are physiological needs, self-concept, role function, and interdependence. The regulator subsystem receives internal and external stimuli which is basically chemical or neural. These act primarily upon the physiological mode and influence organs to maintain a dynamic equilibrium. The cognator subsystem receives inputs which are psychological, social, and physiological in nature. These stimulate four kinds of cognator processes: perceptual/information processing, learning, judgment, and emotion (Roy & Roberts, 1981).

The first adaptive mode or effector of adaptation is the physiological need, which is concerned with the body's basic needs. The self-concept mode involves "the beliefs and feelings that one holds about oneself at a given time" (Roy & Roberts, 1981, p. 43). The role function mode is "the performance of duties based on given positions in

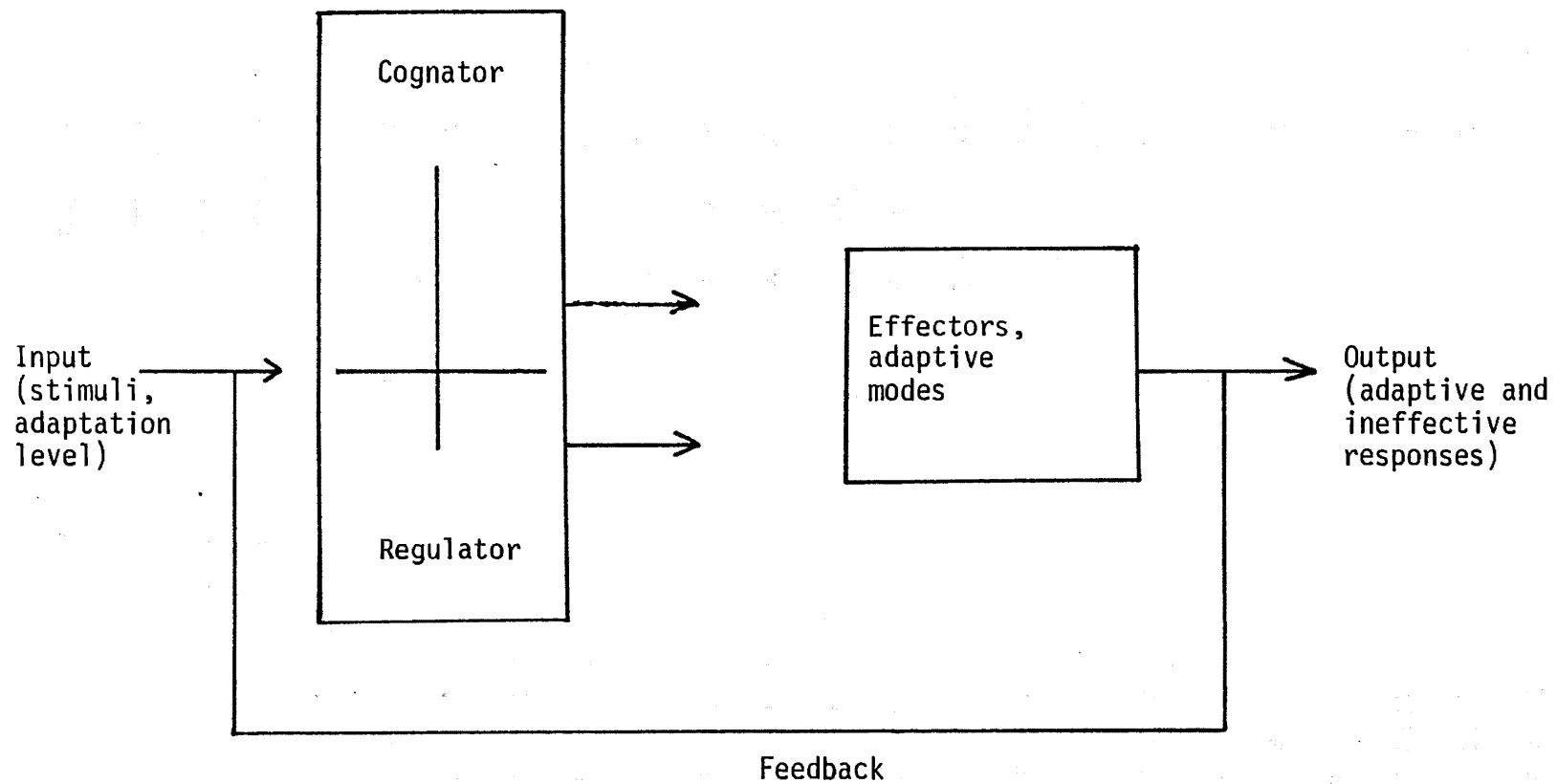


Figure 1. The person as an adaptive system. (From Theory Construction in Nursing by C. Roy and S. L. Roberts. Prentice-Hall, Inc., 1981, p. 58. Reprinted by permission.)

society. The way one performs a role is dependent on one's interaction with the other in the given situation" (p. 44). The interdependence mode is determined by relations with significant others.

Based on the Roy Adaptation Model, the goal of the nurse is to promote patient adaptation in relation to the four modes. When the nurse is concerned with the patient's difficulties and helps to bring about adaptation, the patient has every freedom to react to other stimuli which promotes overall wellness. The appropriate nursing intervention, then, consists of manipulating the stimuli in such a way that the patient is able to respond adaptively. The nurse may increase, decrease, or change in some fashion the stimuli, and the patient is an active participant in determining his own needs (Roy & Roberts, 1981).

Any role receives input from both internal and external sources, but those external stimuli obtained through perception and social learning are of more significance (Figure 2). These stimuli are supplied in the form of role cues, which allow the role-taker to learn the expected response to the other, and of cultural norms which identifies expected criteria by which to be measured. Based on the inputs of role cues and cultural norms, the output is the individual's role performances. This is a result of mechanisms for articulating role sets and for reducing role strain and/or ambiguity. The wholeness of the role system functions to maintain "the person's basic need for social integrity and secondarily, to promote the person's adaptation to society" (Roy & Roberts, 1981, p. 266).

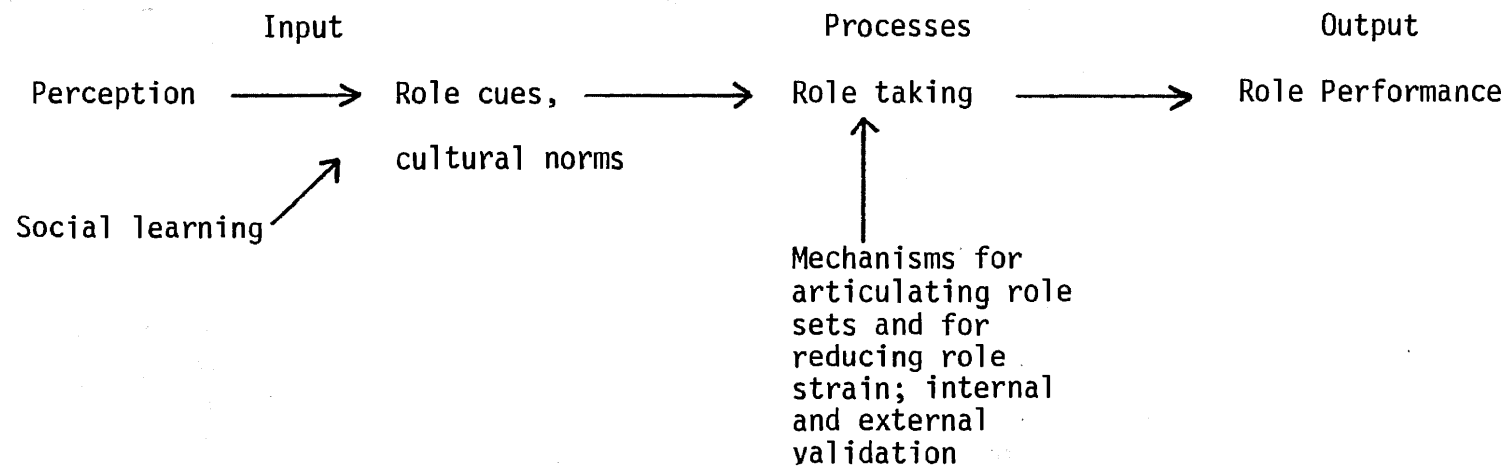


Figure 2. Role function system. (From Theory Construction in Nursing by C. Roy and S. L. Roberts. Prentice-Hall, Inc., 1981, p. 265. Reprinted by permission.)

The role function mode has several propositions which were relevant to the problem of this study. One proposition states that "adequacy of social learning positively influences the clarity of input in the form of role cues and cultural norms" (Roy & Roberts, 1981, p. 267). A second proposition related to role function states that "activity of mechanisms for reducing role strain and for articulating role sets (e.g. choice) leads to adequacy of role taking" (Roy & Roberts, 1981, p. 267).

The nurse who directs a role play program provides role cues and information on cultural norms for the subjects who seek clarification of their roles. Children who attend a role play program prior to the day of outpatient surgery seek to reduce role ambiguity and to increase role adequacy. Attendance at the program provides an opportunity for anticipatory socialization into the role of pediatric outpatient, and the learning of role expectations allows the subjects to gain greater role adequacy. The mothers receive information intended to lessen their anxiety about role expectations, thus enabling them to assist their children in gaining greater role adequacy. Therefore, the child who is provided with the chance to obtain role cues prior to the day of surgery may experience a higher level of role adequacy than children who are not provided with such a chance. The mother who attends a group role play program with her child may feel less anxious on the day of her child's surgery than the mother who does not attend a group role play program with her child.

Assumptions

The assumptions inherent in this study were:

1. Surgery is a stressful period for the child.
2. Surgery on a child is stressful to the mother.
3. Some mothers of children undergoing surgery need assistance in providing support to their children.
4. Children undergoing surgery need assistance in maintaining role adequacy.

Hypotheses

This study was designed to test the following hypotheses.

1. Children who attend a role play program prior to their out-patient surgery demonstrate postoperatively a significantly greater level of role adequacy than those children who do not attend the program when the child's preoperative level of role adequacy is controlled.
2. Children who attend a role play program prior to their out-patient surgery demonstrate postoperatively a significantly greater level of role adequacy than those children who do not attend the program when the mother's state anxiety level and age and gender of the child are controlled.
3. Mothers who attend a role play program prior to the day of their children's surgery demonstrate significantly less state anxiety during the child's preoperative period than those mothers who do not attend the program with age and gender of the child and mother's trait anxiety controlled.

The following variables constituted those examined in the hypotheses.

<u>Independent Variable</u>	<u>Dependent Variable</u>	<u>Control Variable</u>
Attendance at group role play program	a. Child's role adequacy	1. Age and gender of child
	b. Mother's state anxiety	2. Trait anxiety of mother
		3. State anxiety of mother

Definition of Terms

The definitions used in the study were as follows.

1. Level of role adequacy: the degree of role behaviors obtained or maintained by the child prior to surgery as measured by the Pre-hospital Behavior Questionnaire (Vernon, Schulman, & Foley, 1966) (Appendix A) or 1 week following surgery as measured by the Posthospital Behavior Questionnaire (Vernon et al., 1966) (Appendix B).

2. Mother's state anxiety: the degree of situational anxiety measured by the State Anxiety component of the State-Trait Anxiety Inventory (Spielberger, Gorsuch & Lushene, 1970) (Appendix C).

3. Mother's trait anxiety: the degree of on-going anxiety measured by the Trait Anxiety component of the State-Trait Anxiety Inventory (Spielberger et al., 1970).

4. Role play program: a group role play session for children and parents the week prior to the outpatient surgery. This program

included a tour of the hospital, a question and answer session, role modeling by the nurse, and role play by the children and parents (Appendix D).

5. Pediatric outpatient: a child between the ages of 3 years and 9 years who had eye, ear, nose, or throat surgery through the outpatient surgery department.

Limitations

The following limitations were acknowledged.

1. The non-random sample limited the generalizability of the findings of this study.
2. The self-selection of subjects to the role play program may have affected the results of the study.

Summary

Pediatric outpatient surgery is becoming more prevalent as one way to use hospital facilities more effectively. However, in that particular situation, the children have little opportunity to acquire information about expectations of their role performance during the surgery experience. A group role play program by the nurse which promotes effective adaptive responses may be one way to provide role cues and cultural norms to these subjects and to lessen anxiety in their mothers. Therefore, this study sought to determine whether or not there was a difference in the role adequacy of subjects who attended a role play program prior to the day of outpatient surgery

and those who did not attend a role play program prior to the day of outpatient surgery and whether or not there was a difference in the mother's anxiety when she attended the program with her child.

CHAPTER 2

REVIEW OF LITERATURE

During a search of the available literature regarding role adequacy of pediatric outpatients several areas were reviewed. These included the present information on the psychological effects of surgery and hospitalization on young children and their parents and current efforts to prepare these children and their parents for the experience. Other areas for consideration were those of pediatric outpatient surgery and role adequacy.

Effects of Hospitalization and Surgery

Since the classic study by Prugh, Staub, Sands, Kirschbaum, and Lenihan in 1953, much attention has been given to the emotional reactions of children to illness, hospitalization, and surgery, but the literature offered conflicting data.

The study by Prugh et al. (1953) was conducted as a result of the interest of the nursing service of the hospital where it was undertaken. To study the emotional effects of brief hospitalization and the long-range reactions of the children to hospitalization, two groups of 100 children each (ages 2 to 12 years) were chosen as the experimental and control groups. In the control group, the parents were permitted to visit only 2 hours a week and were given little encouragement or

opportunity to participate in the care of the child. In the experimental group, parents visited daily and were encouraged to participate in their child's care. There was a special play program, and psychological support was received by the children before and during painful procedures. In the opinion of the investigators, the children in both groups who showed successful adjustment to the hospitalization experience also appeared to relate satisfactorily with the parents, especially the mothers. When the two groups were compared immediately following discharge from the hospital, the results indicated that 92% of the control group and 68% of the experimental group suffered significant regressive behavioral changes.

The most common post-hospitalization reaction displayed was anxiety over separation from parents. Other disturbing behaviors noted were hyperactivity, temper tantrums, sleeping and eating disturbances, aggression, and, among the older children, withdrawal and heightened dependence. In the control group of children aged 2 through 5 years of age, approximately 42% had severe reactions (lasting 3 months or longer) to hospitalization; approximately 50% exhibited symptoms of a moderate reaction (persisting less than 3 months); and the remainder had minimal reactions (mild disturbances observed primarily in the hospital). In the experimental group of the same age, approximately 22% had severe reactions; approximately 45% had moderate reactions; and the remainder, minimal reactions. In the control group of children ages 6 through 12 years, there were indications of severe reactions in

approximately 30% of them; moderate reactions in approximately 60%; and minimal reactions in the remainder. In the experimental group of this age, none had severe reactions; however, approximately 55% had moderate reactions and approximately 40% had minimal reactions (Prugh et al., 1953).

In 1966, Vernon et al., studying behavioral changes in children following hospitalization, developed a 27 item questionnaire in an attempt to determine what relationships exist among symptoms exhibited by children in the posthospital period. When factor analyzed, the questionnaire yielded six dimensions: (1) general anxiety and regression, (2) separation anxiety, (3) anxiety about sleep, (4) eating disturbances, (5) aggression toward authority, and (6) apathy-withdrawal. The study, involving 387 children ranging in age from 1 month to 16 years, showed that for the majority of the children behavioral changes included increased sleep anxiety, increased aggression toward authority, and increased separation anxiety. There was evidence of greater psychological upset in children hospitalized for 2 or 3 weeks than in those hospitalized for briefer periods. Although the pre-school (6 months to 4 years) child scored highest on factor 2 (separation anxiety), the young school-age (6 to 8 years, 11 months) child also showed symptoms of separation anxiety. The children of school-age showed the greatest number of symptoms reflecting aggression toward authority. Ninety-seven children (25%) of the sample had total scores which were indicative of psychological benefit.

When the scores were compared with regard to sex, prior hospitalization, and degree of pain experiences, there were no statistical differences for any of those groups. Parents were permitted to visit from 10:00 A.M. to 7:00 P.M., and beds were provided for parents whose children were in private rooms. However, there was no investigation of the children's post-hospitalization behavior with regard to the presence or the absence of the mother (Vernon et al., 1966).

The study by Davenport and Werry (1970), using the questionnaire developed by Vernon and his co-workers, did not support the notion that psychological upset occurs in children following hospitalization. The children involved in the study ranged in age from 1 to 15 years and had been admitted to two different hospitals for surgery with general anesthesia. Controls for the children in one hospital were children having routine physical examinations in a clinic. The controls for the children in the other hospital were non-hospitalized siblings. The study did not report if the groups were matched with regard to age; however, the age ranges in the groups were similar. Although mentioning separation from parents as a determinant of psychological upset, Davenport and Werry did not state what visiting privileges were allowed the parents. There is a possibility of delayed effects (i.e., beyond 14 days) but the findings supported the authors' conclusion that the majority of the children appeared to "suffer no residual behavioral effects after brief hospitalization, inhalation anesthesia, and eye, ear, nose, throat, and dental surgery"

(Davenport & Werry, 1970, p. 823). The authors suggested that the differences in their findings and those of other studies may have been due to the very short length of hospitalization and the minimal discomfort experienced by the children.

Sides (1977) also investigated children's responses to illness and hospitalization and his evidence conflicted with the findings of Davenport and Werry. He revealed that from the sample of 190 children between the ages of 5 weeks and 16 years, 64.16% evidenced post-hospitalization behavior upsets extending for at least a 2 week period. Fifty-seven (52.78%) of the children who were age 5 or older experienced a behavior upset, while 64 (78.05%) of the children under 5 years had behavioral upsets.

Not only did data support the notion that hospitalization can be distressing to children, the literature suggested that the hospitalization of children is distressing to the parents as well. Gofman, Buckman, and Schade (1957) interviewed 100 parents at the time of the child's admission to the hospital and 68 parents were interviewed at the time of the child's release. When asked at admission of the child how they felt about bringing the child to the hospital, all the parents expressed anxiety and in 57 of the parents, an overwhelming dread and fear was felt. However, a factor which influenced this anxiety was the fact that the parents and children were separated during the children's hospitalization. Another common basis for anxiety was the parents' lack of information about the reasons for treatment. When the

parents were interviewed at the children's dismissal, they stated that they felt better about the hospitalization due to the efforts and interest of the nurses. Thirty-nine of the parents stressed the need for preparation and support for parents and children from the nurses when there were procedures to be performed. As a result of the findings, the hospital where the study was conducted relaxed the visiting hours.

A similar study by Frieberg (1972) looked at not only the aspects concerned with the hospitalization of the child, but also the effects on the child and family after dismissal. Although the sample was small ($N = 25$), Frieberg found that a majority of the mothers mentioned lack of information about procedures and treatments and fear about procedures and treatments as sources of anxiety. The mothers reported that the nurses did not spend enough time with the patients and that much more support was needed than that given by the nurses to the mothers. Most of the mothers were present throughout the child's hospitalization; however, the children could not be protected from painful procedures, strange sights, people and equipment, and various aches and pains. Not surprisingly, the children reacted with crying or aggressive behaviors following hospitalization, and a majority of them demonstrated fear of separation in the home setting.

Bright (1965) recognized the impact of the child's hospitalization on the parent. Bright observed that when the mother became anxious, she can transmit this anxiety to the child, resulting in increased

anxiety in the child. The author suggested that the nurse should be aware that loss of confidence in mothering skills is a major source of anxiety and that opportunities for the mothers to give care should be provided.

Aufhauser and Lesh (1973) reported that at one hospital a nurse had the position of parent-teacher and counselor. The nurse had responsibility for preparing the child and the parents for procedures and surgery. The authors claimed that parents are anxious but seldom able to express their anxieties; thus, the parents, as well as the child, need assistance in developing coping behaviors.

Hardgrove and Dawson (1972), in discussing the family's role in pediatrics, contended that when the child is brought to the hospital, the mother feels that the nurse usurps her position. They recommended that every effort should be made to establish and maintain open lines of communication.

Gildea and Quirk (1977), in an article on pain experiences in children, remarked that when the child experiences pain, the mother feels as though she has failed in her role. She may become over-demanding or act angry with the staff performing the painful procedure. Anxiety about the child's illness can be communicated to the child and result in increased fear in the child.

The preceding literature concerning the effects of hospitalization and surgery on the child and the parents suggested that hospitalization is an unsettling period for both the child and parent. Most of the

studies argued that negative behavioral changes occurred in the post-hospital period and that the younger child tended to be more seriously affected than the older child. The authors observed that parental anxieties occurred as a result of separation from the child and inadequate information received concerning the child's situation. It was proposed that the nurse could alleviate much of the parents' anxiety by establishing and maintaining open lines of communication.

Preparation for Hospitalization and Surgery

Scahill (1969) argued that hospitalization can cause emotional trauma in the young child who is trying to achieve self-mastery. She suggested that the nurse's role is to support the child in his dependency needs and help him cope with the strangeness of his environment. In her experience, Scahill found that adequate preparation prior to surgery alleviated many of the child's fears and anxiety.

A special admitting unit was established in one hospital to help alleviate some of the stress of hospitalization, according to Koss and Teter (1980). The nurses provided pre- and post-surgical teaching and gave explanations of procedures and parents were encouraged to participate in the child's care. The authors noted that the parents became relaxed and that the nursing staff was perceived as being less threatening than during former admission routines.

In 1965, Mahaffy investigated a method to reduce parental distress in order to reduce the child's distress during hospitalization. In his study, the nurse provided a supportive, understanding atmosphere which

encouraged communication between mother and nurse. This approach was intended to help the mother become less anxious during the child's hospitalization by providing her with information needed to assist her in adapting to the situation. With a sample of 43 children between the ages of 2 and 10 who were admitted for a tonsillectomy and adenoidectomy, the findings revealed that children whose mothers had received the experimental nursing care recovered more rapidly from surgery than children whose mothers did not receive the added nursing intervention. Children in the experimental group had less fever at home than those in the control group. However, the study did not show how the mothers reacted to the experimental nursing treatment.

Skipper and Leonard (1968) believed that the social environment of the hospital can affect the child's response to hospitalization. They hypothesized that by reducing the mother's stress, the child's stress would indirectly be reduced. The sample consisted of 80 patients between the ages of 3 and 9 years of age admitted to the hospital for a tonsillectomy. The experimental condition was similar to that described by Mahaffy in that a nurse attempted to create an atmosphere that would promote open communication between nurse and mother. The mothers in the experimental group were found to be less stressed than the mothers in the control group. The researchers observed that increased interaction with the mothers by the nurse reduced stress in children.

Vernon (1973) studied the use of modeling to reduce stress in children. Thirty-eight children between the ages of 4 and 9 years hospitalized for surgery were divided into a control and an experimental group. The ones in the experimental group viewed a preparation film which depicted children calmly undergoing anesthesia. The findings indicated that modeling is effective in reducing aversive behavior.

A second investigation on modeling was reported by Melamed and Siegel in 1975. The study was designed to investigate modeling as an effective way to reduce emotional reactions in children undergoing surgery. The sample, consisting of 60 children between the ages of 4 and 12 years hospitalized for elective surgery, was divided into a control and an experimental group. The experimental group was shown a film about a child having surgery. Responses of the children, as measured by the Children's Manifest Anxiety Scale, indicated that those children in the experimental group had less transitory, situational anxiety than those in the control group. It was also found that the children in the control group had significantly greater behavioral problems several weeks posthospitalization as reported by their parents. Melamed and Siegel concluded that the use of modeling is an effective way to lessen stress in children undergoing surgery.

Wolfer and Visintainer (1975) used social interaction theory as a framework for studying psychologic preparation of the child for the hospitalization experience. This approach held that the parents' stress

can be conveyed to the child, and that the emotionally upset parent cannot help the child to cope with stress. The sample of 80 children between the ages of 3 and 14 years was divided into an experimental and a control group. The parents and children in the experimental group received special support and care at 6 different times during the hospitalization. These 6 times were identified as stress points and included admission, before the blood test, the afternoon before surgery, before the preoperative medication is given, before transport to the operating room, and returning to the room from the recovery area.

The authors reported that significant differences were found on ratings of upset behavior, pulse rate, cooperation during procedures and anesthesia induction and the posthospital period. Parental anxiety was less in the experimental group, and the parents in the experimental group expressed greater satisfaction with the information received and with the overall care. However, the research nurse may have influenced the parents' responses by being the primary care giver (Wolfer & Visintainer, 1975).

In a second study by Visintainer and Wolfer (1975) three treatment groups were used as well as a control group. The treatments were the stress point preparation as previously used, a single session preparation, and a consistent supportive care condition. In the sample of 84 children, the stress point preparation was found to be consistently

better than the other treatments except when contrasted with the single-session preparation.

In 1979, McGrath investigated parental and child preparation in a group setting to determine if this preparation would aid in adaptation to the setting. Stress point nursing was used for the experimental group of 23 children and their parents as described in the 1975 Wolfer and Visintainer study. However, all contact was made in a group setting. The results showed that group preparation was more effective than individual preparation or no preparation at all in helping children and parents adapt to the hospital environment and in the posthospital period.

Wolfer and Visintainer (1979) examined prehospital preparation as a method of reducing the effects of hospitalization. The 163 subjects were assigned to 1 of 5 treatments: (1) control group with routine nursing care, (2) home preparatory materials and routine hospital care, (3) stress point preparation in the hospital, (4) home preparatory materials and stress point preparation in the hospital, and (5) home preparatory materials and consistent supportive nursing care in the hospital. Results showed that the use of home preparatory materials alone or with hospital preparation to be better than the controlled treatment. Hospital preparation was as effective as the combination of home preparation and hospital preparation or as the home preparation by itself. Parents expressed less anxiety when receiving some hospital preparation than when receiving only home preparation.

A study by Roskies, Mongeon, and Gagnon-Lefebvre (1978) investigated the reduction of the trauma of hospitalization in children by increasing maternal participation in the child's care during hospitalization. The sample consisted of 24 mothers in both an experimental and a control group. Those mothers who were in the experimental group were advised to visit their children each day and stay as long as possible, while the mothers in the control group were not restricted but not encouraged either in their visiting habits. The findings revealed that the mothers and fathers in the experimental group visited significantly more than those in the control group. The mothers of the experimental group participated more in their children's care and had less difficulty with their roles in the hospital setting than the mothers in the control group.

Ferguson's research (1979) examined two methods of preparing children ages 3 to 7 years for hospitalization. There were four groups of children: (1) those who were admitted as usual to the hospital, (2) those shown a modeling film on admission, (3) those who received a preadmission home visit from the nurse, and (4) those who received a preadmission home visit and also viewed the modeling film on admission. The method of preadmission home visit by the nurse was effective in lessening the parent's anxiety during and following hospitalization and in lessening the incidence of negative posthospital behavior in children. The film about two children having surgery similar to those in the second and fourth group was found to be effective in reducing

preoperative anxiety in the children. These findings suggested then that pre-knowledge can assist in reducing anxiety in both children and mothers.

Various methods of preparing children and their parents for hospitalization have been cited in the preceding studies. Both hospital preparation and preadmission preparation were successful as well as the use of modeling techniques in lessening posthospitalization behavioral changes in children. Data also indicated that parents, too, are less anxious about their role when preparation was directed toward their needs.

Pediatric Outpatient Surgery

When the literature concerning outpatient surgery was reviewed, the financial advantages and lack of surgical complications were related in several articles, but very little was found regarding the prevention of trauma to the pediatric outpatient. Lindheim, Glaser, and Coffin (1972) remarked about the combination of sky-rocketing hospital costs and new forms of medical treatment providing an opportunity for health care workers to consider alternatives to hospitalization of children. They recommended that a day hospital would be appropriate for the child who does not require round-the-clock supervision.

Cloud, Reed, Ford, Linkner, Trump, and Dorman (1972) reported that hospital bed shortages and nosocomial infections prompted physicians originally to utilize outpatient treatment. However, rising costs have

become a major factor in today's economy; and, as one way of overcoming this problem, an outpatient surgical facility has been devised. The authors found pediatric surgery could be safely performed with the patients leaving the surgicenter about 75 minutes after surgery. They claimed that emotional trauma was minimized, but no data were offered to support this statement.

Bell (1974) stated outpatient programs provide better care for children with uncomplicated elective problems. She related that one program provided for individual instruction of parents and children the day prior to surgery and that parents and physicians alike have been pleased with the service. Lee (1974), in discussing the same program, recommended that ideally the patient should live within a 30 to 40 mile radius of the hospital and that outpatient surgery is safer when connected to a hospital unit rather than a free-standing facility, as the hospital is better equipped to provide continuous care when complications arise.

Ahlgren (1973) reviewed 4 years of the same program and stated that parents reported few adverse symptoms after the child's release from the hospital, and that most of the children (67%) had happy memories of the experience. Ninety-nine percent of the parents stated that they would be happy to use the same service again. Davis (1974) contended that one-day surgery can result in a 25% savings in hospital costs, and that facilities can be used more efficiently. He pointed out that, in the program he studied, the anesthesiologists found the

outpatients to be less sedated and tranquil than inpatients. However, the children tend to recover more rapidly, thus leading to an earlier release from the unit than the more sedated patients.

Koncel (1978) and Grossman (1979) both reported that outpatient surgery was less costly than inpatient surgery and Bartlett, Battit, Rockett, Perry, and Austin (1979) agreed. Bartlett et al. held that the quality of care was not affected, but there were no data regarding psychological response to the experience.

Cohen et al. (1980) indicated that parents, although overwhelmingly in favor of outpatient surgery, felt that preoperative preparation tended to be inadequate. Cohen et al. said that a pamphlet has been revised to meet those concerns in this particular situation.

Shah, Parageorgis, Robinson, Kinnis, and Israels (1969) studied parental attitudes to determine if day care surgery would be acceptable to them. In the sample of 611 parents whose children had been hospitalized, they found only 45% of the subjects would choose this as an alternative. However, in 1972, Shah et al. conducted a study about day surgery for children which investigated the frequency of complications following outpatient surgery and parental attitudes toward that type of surgery. The sample consisted of 116 children having outpatient surgery and a like number who had the same type of surgery as inpatients. Parents of children having outpatient surgery had positive attitudes toward that type of care and those of children having inpatient surgery preferred hospital care.

In the article on pediatric anesthesia by Steward (1975), it was remarked that preoperative preparation was essential, but no data were presented concerning the results of such preparation. However, Mason (1978) reported that the use of a film showing a child having surgery as an outpatient was helpful in reducing stress in children. The film emphasizes the role of the parent in helping the child, but Mason did not explain how this film was used.

The literature about pediatric outpatient surgery revealed that surgery performed in that fashion was successfully accomplished with few resulting complications. Cost containment was mentioned as a factor in the physician recommending outpatient surgery and appropriate use of the facilities was also a deciding variable. Investigation into parental attitudes toward pediatric outpatient surgery had variable results and the importance of preoperation preparation was stressed but supported with little or no data. Therefore, if pediatric outpatient surgery is selected over inpatient surgery for children, more information is needed to determine how to prepare the patient and the mother for the experience.

Role Adequacy

Thomas and Biddle (1966) remarked that

Individuals in society occupy positions, and their role performance in these positions is determined by social norms, demands, and rules; by the role performances of others in their respective positions; by those who observe and react to the performance; and by the individual's particular capabilities and personality. (p. 4)

Hurley (1978) stated that role learning was not a static process but one that continued throughout life. The learning of new roles are best facilitated during certain "critical periods" (p. 63). The period of hospitalization and surgery could be termed a critical period in the life of parents and their children.

Goode (1960) stated that role strain or role ambiguity is a felt difficulty in fulfilling role obligations, and that the individual will use available coping mechanisms to reduce strain. Burr (1972) stated that role strain or role conflict could be reduced through role clarity.

Meleis (1975) proposed the framework of role insufficiency as a way of identifying needs of clients. The author said

Role insufficiency is any difficulty in the cognizance and/or performance of a role or of the sentiments and goals associated with the role behaviors as perceived by the self or by significant others. (p. 266)

Role insufficiency can occur during period of role transition and when there is poor role definition or lack of knowledge or role behaviors. Role supplementation, according to Meleis, is a process to alleviate role insufficiency through the conveying of information which will enable the client to fulfill his role obligations. This can be done through role modeling or role rehearsal.

Meleis and Swendsen (1978) tested this framework to determine if role supplementation was a viable nursing intervention. They studied the effects of a role supplementation program on new parents. The supplementation was an attempt to develop role clarity in a transitional period through the strategies of role modeling, role

rehearsal, and the reference group. The couples in the experimental group attended eight weekly group meetings. The investigators related that the wives in the experimental group had considerably less anxiety in the post delivery period than the ones in the control group. Husbands in the experimental group had significantly less anxiety at the post delivery period when compared with those in the control group. That indicated that role mastery can be assisted through nursing intervention.

Galligan (1979) denoted that nurses can help children with their roles by assessing them during the prehospitilization stage to determine their adaptive abilities. By helping the child to adapt in the preoperative stage, the nurse enables him to have more energy available for the healing process. Role functioning changes as a result of the hospitalization and play is a useful tool to help him reorganize his life. Galligan recommended that one nurse be assigned to the patient for his care, but there was no mention of assisting the parent during that period.

Petrillo and Sanger (1972) recommended one main caregiver to promote role adequacy in children. The use of teaching models to prepare children and their parents for procedures was suggested and the author urged that parents be provided with opportunities to express their concerns. Parental participation in helping the child to adapt to the hospital experience was also deemed essential. Use of age-appropriate play was also recommended.

Knudsen (1975), in an article on play therapy, stated that pre-operative play sessions are beneficial in helping a foreign environment to become familiar. Play sessions provide the child with an opportunity to express fears and anxieties and to adapt to the expectations of the situation with less stress.

A study by Merrow and Johnson (1968) investigated the mother's perception of her role with her hospitalized child. Fifty mothers generally felt that they could be responsible for more child care items than the nurses realize.

Roy (1967) investigated a way to help the mothers adapt to the hospital setting by providing role cues concerning her behavior. The sample consisted of 30 mothers, some of which received role cues about the child's needs. Those mothers provided with role cues felt more adequate according to Roy.

The literature regarding the promotion of role adequacy in children having surgery was scant but several recommendations emerged. The use of play to help children to adapt was suggested and providing mothers with cues regarding their roles was presented as a way of helping them adapt to the situation.

Summary

The literature offered support that surgery and hospitalization can be a stressful time for both children and parents. Behavioral changes occur in children following hospitalization and parents react to the event with anxiety. Several methods of preparation, such as

role modeling and teaching, were recommended as a means of decreasing the effects of surgery and hospitalization and it was deemed essential that both parents and children be prepared prior to the occurrence. Although pediatric outpatient surgery was suggested as one way to lessen the trauma of hospitalization, little data were available to substantiate that belief and the need for further investigation into the preparation of pediatric outpatients and their mothers was apparent. Several studies which examine role supplementation as an appropriate nursing intervention led this researcher to the belief that supplying role cues and information about role expectations would assist pediatric outpatients to maintain role adequacy and lessen their mothers' anxiety.

CHAPTER 3

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

This ex post facto comparative study was conducted to determine whether or not a significant difference exists in role adequacy of pediatric outpatients who attend a group role play program and pediatric outpatients who do not attend a role play program. In addition, it sought to determine if a significant difference exists in the state anxiety of the mothers who attend a role play program and those mothers who do not attend the program. This design was chosen because the investigator was unable to manipulate the independent variable (Isaac & Michael, 1971). Rather, the assignments into groups was based on self-selection and/or whether or not the children and their mothers attended the role play program to which all pediatric outpatients and their families were invited.

The treatment group was composed of pediatric outpatients and their mothers who attended a group role play program and the control group was composed of pediatric outpatients and their mothers who did not attend the group role play program. The independent variable was attendance at the group role play program. The dependent variables were role adequacy of the child as measured by the prehospital and posthospital behavior scores and the mother's anxiety as measured by the state anxiety score. Attribute variables (Kerlinger, 1973)

analyzed in relation to the other variables were gender and age of the child and the mother's trait anxiety.

Setting

The study was conducted in a privately owned children's hospital located in a large metropolitan area in the Southwest. The 72-bed hospital treats children with varying diseases and disorders from birth through the age of 21 years. Most of the patients treated there are in the middle socioeconomic class and there is usually a daily surgical schedule of approximately 20 patients with many of them being outpatients.

On the day prior to surgery, all outpatients received an examination by the physician in his office and then came to the hospital for laboratory tests, paperwork, and instructions concerning arrival time and being without food or drinks on the day of surgery. The day of surgery, the child was checked into the Outpatient Surgery Department, had vital signs taken, and was given preoperative medication. The parents were allowed to be with the children at all times, and when injections were given, they were allowed to hold their child or to stay beside the child's bed. The surgical personnel took the children to the surgical suite on the third floor, and the parents waited in the lobby of the third floor. When the children were in the recovery room and beginning to react from the anesthesia, the parents joined them. One parent was allowed to stay at all times with the child. Once the children reacted and were stable, they were moved to a post-recovery

room and kept until they were well oriented and taking fluids without difficulty. When this had occurred, the children were released to the home care of the parents.

Population and Sample

A convenient sample was taken from all pediatric outpatients having surgery beginning August 9, 1982 until a sample of 50 subjects for the group who attended the role play program and 50 subjects for the group who did not attend the role play program was obtained. The criteria for inclusion into the study were:

1. The child was between the ages of 3 and 9 years.
2. The child had not been hospitalized or had surgery within the past 6 months.
3. The child was scheduled as an outpatient for either eye, ear, nose, or throat surgery.
4. The child had no existing behavioral problems which required treatment.
5. The mother was able to understand and read English.

Children under the age of 3 were eliminated from the study because few mothers took children under that age to the group role play program. Children who had been recently hospitalized or had surgery could have anxieties related to that episode, and their mothers might have had preconceived ideas based on that experience. Children having either eye, ear, nose, or throat surgery usually have similar pain experiences. Children with existing behavioral problems under

treatment might have caused a biased response and were thus eliminated from the study.

Protection of Human Subjects

All subjects admitted in the study were included only after implementation of the following safeguards. On the day prior to the scheduled surgery, when the mother and child came to the hospital for a preadmission visit, the researcher asked the mother to participate in the study. A verbal explanation of the study was given at that time (Appendix E) and the mother was also required to sign a written consent form (Appendix F) if she agreed to participate. Although risks were anticipated to be minimal, the possibility of the mother's emotional reaction to the questionnaires could not be discounted. Therefore, it was stressed several times that participation was voluntary and that the subjects could withdraw from the study at any time without any type of penalty. A description of the expected benefits were given and any questions were fully answered. The mother received one copy of the consent form, one copy was retained by the researcher, and the third copy was filed with the Human Subjects Review Committee.

Confidentiality of the subjects was insured through the use of a code on all questionnaires so the questionnaires could be appropriately correlated. Data were kept in a locked file and there was no way to identify which questionnaire corresponded with a given subject. A master list was maintained by the researcher with telephone numbers of

the subjects so they could be called a week following the child's surgery to remind the mother to complete the Posthospital Behavior Questionnaire on her child. When all data were collected, the master list was destroyed.

Prior to any data collection this proposal was approved by the investigator's doctoral committee of Texas Woman's University and the safeguards of the proposed study were approved by the Human Subjects Review Committee (Appendix G). Signed permission was obtained from all participating physicians (Appendix H) and the hospital (Appendix I) prior to data collection.

Instruments

Three instruments were selected to collect the data needed to test the hypotheses. They were as follows.

Prehospital Behavior Questionnaire

To measure the child's role adequacy prior to outpatient surgery, the Prehospital Behavior Questionnaire was used. The Prehospital Behavior Questionnaire developed by Vernon et al. (1966) measured the pediatric outpatients' behavior prior to surgery. Reliability for the questionnaire was determined on a sample of 37 by Cassell (1965), who found the correlation between the total scores on the questionnaire given at 3 days and 30 days after hospitalization was $r = .65$, $p < 0.001$. Construct validity was established by Vernon et al. (1966) by comparing the questionnaire total scores with independent ratings of nondirective

interviews with parents by psychiatrists. Parents of 20 children having tonsillectomies were first interviewed about changes in behavior following hospitalization, but questions about symptoms specifically mentioned in the questionnaire were avoided. They later filled out the questionnaire. Correlation (r) between the ratings of change in behavior and the total scores from the questionnaire was found to be .47 ($0.05 > p > 0.02$). Davenport and Werry (1970) supported the reliability of the tool on a sample of 99 well children when they computed a percent ratio agreement on each item of the questionnaire varying between 0.75 to 0.98. Construct validity was thought to be found because of the consistency with which the mothers rated their children over a 2-week period.

The questionnaire consisted of 27 terms which are frequently cited in the literature as being symptoms of behavioral upset. The mother was requested to answer each question as it applied to the child's behavior at the present. Five possible responses were never, scoring 0; very occasionally, scoring 1; sometimes, scoring 2; often, scoring 3; and all of the time, scoring 4. The study by Vernon et al. (1966), as a result of factor analysis, identified six factors: (1) general anxiety and regression, (2) separation anxiety, (3) anxiety about sleep, (4) eating disturbances, (5) aggression toward authority, and (6) apathy-withdrawal. Total scores were obtained with zero as a possible low score indicating a greater level of role adequacy and and a possible high score of 108 indicating a lower level of role

adequacy. Also on the questionnaire was a space for the mother to write in the child's age and gender.

Posthospital Behavior Questionnaire

To measure the child's role adequacy following outpatient surgery, the Posthospital Behavior Questionnaire was used. It was identical to the Prehospital Behavior Questionnaire, but it was completed by the mother a week following the child's surgery.

State-Trait Anxiety Inventory

To test for anxiety of the mother, the State-Trait Anxiety Inventory (STAI) was selected (Spielberger et al., 1970). The State-Trait Anxiety Inventory measured the mother's anxiety at the time of the child's surgery (state anxiety) and the level of her ongoing anxiety (trait anxiety). Zuckerman (cited in Zuckerman, 1976) stated that state-trait anxiety tests should meet the following criteria:

1. Trait and state tests should have high internal consistency or item reliability, but trait tests should show high retest reliability, wherein state tests should have lost retest reliability. . . .
2. Trait and individual state tests that purport to measure the same construct should correlate moderately with the mean of a number of state tests. (p. 136)

Hedberg (1972), in his critique of the STAI, stated that it met those criteria. He said

A-Trait reliability for males and females varies between .86 and .73 while A-State varies between .54 and .27 for a retest period of 20 days and 104 days, respectively. . . . Concurrent validity with other A-Trait measures, MAS and IPAT, yields correlations between .75 and .85 for college students and psychiatric patients. (p. 389)

Hedberg (1972) found that its strengths included its brevity, inexpensiveness, and ease of administration and scoring. Spielberger, Auerbach, Wadsworth, Dunn, and Taulbee (1973) used the test in evaluating the emotional reactions of patients to the stress associated with having major surgery. As expected, they found that the STAI A-State scores were higher before surgery, but that the STAI A-Trait scores were essentially the same before and after surgery.

The test, written at an elementary grade reading level, consisted of 20 items designed to provide an index for A-State and 20 items to provide an index for A-Trait. Responses were scored on a four-point scale. For the A-State index, the responses were (1) not at all, (2) somewhat, (3) moderately so, and (4) very much so. For the A-Trait index, the responses were (1) almost never, (2) sometimes, (3) often, and (4) almost always. Total scores were coded for each index with a possible low anxiety score being 20 to a possible high anxiety score of 80.

Demographic Data Master List

Certain demographic data were obtained from either the mother or hospital records at the time of the subject's entry into the study. This included information on the child's prior hospitalization and any behavior problems. The family's telephone number was obtained so that the researcher could call the family in 1 week. It was also determined whether or not the mother and child attended the role play program and data were obtained regarding the child's race (Appendix J).

Data Collection

Information regarding pediatric outpatients and their mothers who attended the group role play program was obtained each week so that the subjects could be correctly placed into groups. During the pre-admission visit on the day prior to the scheduled surgery, all subjects meeting the previously stated criteria were asked to participate in the research. All participating mothers were required to sign consent forms at that time and requested to complete the Prehospital Behavior Questionnaire.

On the day of surgery, after the child's vital signs were taken, the mother was requested to complete the STAI. The mother was also given the Posthospital Behavior Questionnaire and instructions on how to complete it. She was requested to complete it in 1 week and return it to the researcher in a stamped envelope which was furnished her. In 1 week, the researcher called the mother and reminded her to complete the questionnaire and mail it.

The group role play program that the treatment group attended was presented by a staff nurse and child life director. A thorough description of the role play program is in Appendix D and the slide presentation is in Appendix K. The program was designed to provide the mothers and children with role cues and cultural norms regarding expected behaviors during the outpatient experience. The group role play program incorporated role modeling by the nurse and role play on the part of the child as a method of learning which provided peer

support, social and emotional interaction, communication between subjects, and an economically feasible way for the nurse to reach large numbers at one time (Saran & Saran, 1976). According to Saran and Saran, role play is especially helpful in clarifying problems and can be used in many instances. The other group received the routine information at the time the children were brought to the hospital for presurgery tests and for surgery.

Treatment of Data

Various types of analysis of the data were utilized. Descriptive statistics regarding the subjects in each group were determined with the range and the mean of the children's ages computed. Range and mean scores were determined for each interval score variable. To determine whether or not a difference existed between the groups according to gender, the chi square test was utilized. To analyze the mean scores of the groups' ages as well as to determine if any differences existed between the groups on the children's preoperative level of role adequacy, the mother's state anxiety, and the mother's trait anxiety, the t test was used.

Hypotheses 1, 2, and 3 were tested by analysis of covariance to determine the differences between the sets of scores. In all hypotheses, the independent variable was attendance at the group role play program. In Hypothesis 1, the dependent variable was the child's postoperative level of role adequacy and the covariate was the preoperative level of role adequacy. In Hypothesis 2, the dependent

variable was the child's postoperative level of role adequacy and the covariates were the mother's state anxiety and age and gender of the child. Hypothesis 3 had as its dependent variable the mother's state anxiety and the covariates were the mother's trait anxiety and age and gender of the child. The acceptance or rejection of each hypothesis was at the alpha level of .05.

CHAPTER 4

ANALYSIS OF DATA

This study was conducted to determine whether or not a significant difference in role adequacy exists between pediatric outpatients who attend a group role play program and pediatric outpatients who do not attend a group role play program. The study also explored whether or not a significant difference in state anxiety exists between mothers who attend a group role play program with their children and mothers who do not attend a group role play program with their children. The preoperative level of role adequacy in the children was measured by the Prehospital Behavior Questionnaire (Vernon et al., 1966) and completed by the mothers the day prior to the outpatient surgery. The posthospital level of role adequacy was measured by the Posthospital Behavior Questionnaire (Vernon et al., 1966) which the mothers completed 1 week after the surgery. The mother's state and trait anxiety was determined by the State-Trait Anxiety Inventory (Spielberger et al., 1970) which the subjects completed on the day of the scheduled surgery. Information on the variables age, race, and gender was obtained using a demographic data sheet.

A description of the study sample is found in the initial section of this chapter. In the subsequent section, the findings of the study

will be described in relation to the stated hypotheses. The level of significance was .05.

Description of Sample

The convenient sample was obtained from children between the ages of 3 and 9 years who had outpatient surgery in a 70 bed children's hospital between the months of August, 1982 and February, 1983. The private hospital is located in a metroplex area in the southwestern United States.

Sample Size

The intended goal was a sample size of 50 children and mothers who attended the group role play program (treatment group) and 50 children and mothers who did not attend the program (control group). Thus, once data collection began, the researcher continued to add subjects to the study until all information was collected on 50 children and their mothers in each group.

Of 124 mothers asked to participate in the study, only 3 refused. Thus, initial data were obtained from 63 mothers whose children attended the group role play program prior to surgery and from 58 mothers whose children did not attend the group role play program. However, in the treatment group, 9 (14.3%) of the mothers did not return the Posthospital Behavior Questionnaire 1 week following surgery and 4 (6.3%) of the children were hospitalized following their surgery. In the control group, 7 (12.1%) of the mothers did not return the

Posthospital Behavior Questionnaire and 1 (1.7%) of the State-Trait Anxiety Inventories was inappropriately completed. Thus, the sample size submitted for analysis consisted of 50 subjects in each group.

Age

The mean age of the children in the treatment group was 4.58 years of age with a standard deviation of 1.51. In the control group, the mean age was 4.98 ± 1.82 SD. In the treatment group, 36% (N = 18) were 3 years of age and in the control group, 32% (N = 16) were 3 years old. There were no significant differences in the ages of the groups, $t(98) = 1.20$, $p = .235$.

Gender

The gender of the children in the study sample was computed and it was found that the distribution was equal for the treatment group, but there were more boys (58%) than girls (42%) in the control group. There was no significant difference in the gender of the two groups, $\chi^2(1) = 0.64$, $p = .42$.

Race

An examination of the sample data by race revealed that the overwhelming majority of the children were white. There were 48 (96%) white children in the treatment group with only 1 (2%) black and 1 (2%) Mexican-American child in the group. In the control group, 49 (98%) of the children were white and only 1 (2%) was black.

Findings

The following section is a description of the findings in relation to the hypotheses.

Hypothesis 1

The first hypothesis was: Children who attend a role play program prior to their outpatient surgery demonstrate postoperatively a significantly greater level of role adequacy than those children who do not attend the program when the child's preoperative level of role adequacy is controlled.

The preoperative and postoperative levels of role adequacy of the children as measured by the Prehospital Behavior Questionnaire and the Posthospital Behavior Questionnaire (Vernon et al., 1966) are shown in Table 1.

Table 1
Level of Preoperative and Postoperative Role
Adequacy Mean Scores

Measure	Treatment group ^a mean	<u>SD</u>	Control group ^a mean	<u>SD</u>
Pre	29.70	9.56	28.76	11.25
Post	27.88	9.74	26.76	10.66

^a
n = 50.

Total scores were obtained for each child and mean scores were determined for each group. There was no significant difference in the two groups preoperatively, $t(98) = .45$, $p = .654$ or postoperatively, $t(98) = .84$, $p = .402$.

To test the hypothesis, analysis of covariance (ANCOVA) was computed with the level of significance at the .05 level. There was a significant relationship between the preoperative level of role adequacy of the groups, $F(1,97) = 113.61$, $p = .001$. After controlling for the preoperative level of role adequacy, there was no significant difference between the adjusted scores of the two groups, $F(1,97) = .56$, $p = .456$ (Table 2). Therefore, Hypothesis 1 was not supported.

Table 2
Analysis of Covariance of Effects of Role Play Program
on Postoperative Level of Role Adequacy
with Covariate of Preoperative
Level of Role Adequacy

Source	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Covariate	5532.79	1	5532.79	113.61	.001
Main effect	27.31	1	27.31	0.56	.456
Residual	<u>4723.96</u>	<u>97</u>	<u>48.70</u>		
Total	10283.96	99	103.88		

Hypothesis 2

The second hypothesis was: Children who attend a role play program prior to their outpatient surgery demonstrate postoperatively a significantly greater level of role adequacy than those children who do not attend the program when the effects of the mother's state anxiety level and age and gender of the child are controlled.

Table 3 shows that the analysis of covariance comparing the postoperative level of role adequacy of the two groups resulted in a significant relationship between age and postoperative level of role adequacy, $F(1,95) = 4.72$, $p = .032$. The raw regression coefficient for age was -1.321 indicating an inverse relationship. This indicated

Table 3

Analysis of Covariance of Effects of Role Play Program
on Postoperative Level of Role Adequacy with
Covariates of Mother's State Anxiety and
Child's Age and Gender

Source	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Covariates					
state anxiety	126.41	1	126.41	1.247	.267
age	478.85	1	478.85	4.723	.032
gender	3.37	1	3.37	0.033	.856
Main effect	27.42	1	27.42	0.0270	.604
Residual	<u>9632.30</u>	<u>95</u>	<u>101.39</u>		
Total	10283.96	99	103.88		

that the younger the child, the lower the role adequacy score. When the mother's state anxiety level and the age and gender of the child were controlled and the scores adjusted for the two groups, it was found that there was no significant difference in the level of role adequacy between the groups postoperatively, $F(1,95) = .27$, $p = .604$. The results failed to support Hypothesis 2.

Hypothesis 3

The third hypothesis was: Mothers who attend a role play program prior to the day of their children's surgery demonstrate significantly less state anxiety during the child's preoperative period than those mothers who do not attend the program with age and gender of the child and mother's trait anxiety controlled.

The state and trait anxiety of the mothers as measured by the State-Trait Anxiety Inventory (Spielberger et al., 1970) is reflected in Table 4. Total scores for each mother were determined and mean scores were calculated for each group. The state anxiety mean score for the mothers in the treatment group was greater than that for the mothers in the control group which was indicative of greater state anxiety although there were no significant differences between the two groups in state anxiety, $t(98) = .54$, $p = .589$ or trait anxiety, $t(98) = 1.42$, $p = .158$.

Table 4
State and Trait Anxiety of Mothers

Group ^a	State anxiety mean	<u>SD</u>	Trait anxiety mean	<u>SD</u>
Treatment	44.46	12.23	38.96	10.28
Control	43.14	12.14	36.02	10.39

^an = 50 in each group.

To compare the mother's state anxiety scores, analysis of covariance was utilized and the findings are summarized in Table 8.

Table 5
Analysis of Covariance of Effects of Role Play Program
on Mother's State Anxiety with Covariates
of Mother's Trait Anxiety and
Child's Age and Gender

Source	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Covariates					
trait anxiety	2447.94	1	2447.94	20.05	.001
age	28.58	1	28.58	0.23	.630
gender	173.40	1	173.40	1.42	.236
Main effect	1.06	1	1.06	.01	.926
Residual	<u>11600.43</u>	<u>95</u>	<u>122.11</u>		
Total	14598.00	99	147.45		

There was a significant relationship between the mothers' state anxiety scores and their trait anxiety scores, $F(1,95) = 20.05$, $p = .001$, indicating that the mothers with greater state anxiety tended to have greater trait anxiety as well. When the effects of trait anxiety, age, and gender were controlled, there was no significant difference found in the state anxiety scores of the two groups of mothers, $F(1,95) = .01$, $p = .926$. Hypothesis 3 was not supported by the findings.

Additional Findings

The results from the Prehospital and Posthospital Questionnaires were compared with norms determined by Davenport and Werry (1970). From a group of 145 children between the ages of 1 and 15 years who were not hospitalized, they identified how many had a total number of behavioral symptoms occurring with a frequency of "sometimes" or greater. The mean score was 4.59. The posttest which measured the total number of symptoms occurring with a frequency for "sometimes" or greater resulted in a mean score of 3.44. When mean scores were computed in the current study for the treatment group of outpatients showing a total number of symptoms with a frequency of "sometimes" or greater, it was found their mean score was 9.70 preoperatively and 8.50 postoperatively. The mean scores for the control group were 9.64 preoperatively and 8.26 postoperatively (Table 6). The greater scores indicate less role adequacy. However, the difference between the norms established by Davenport and Werry and these findings may be a result

of the differences in the ages of the children as many of the behaviors on the Vernon et al., 1966 questionnaires occur more frequently in the younger child.

Table 6
Total Number of Frequent Behavioral Symptoms

Measure	Treatment group ^a mean	Control group ^a mean	Norms ^b
Pre	9.70	9.64	4.59
Post	8.50	8.26	3.44

^a \underline{n} = 50.

^b \underline{n} = 145.

Summary

This chapter provided a description of the study sample, study variables, and the statistical findings related to the hypotheses. The convenient sample, obtained from a private children's hospital, consisted of 50 children having outpatient surgery who attended a group role play program with their mothers and 50 children who did not attend a group role play program prior to outpatient surgery. Ages of the children ranged from 3 to 8 years of age with the majority of them being 3 years old. There was no significant difference between the two groups regarding age. There was an equal number of boys and girls in

the treatment group but more boys than girls in the control group. This finding was not significant.

Preoperative level of role adequacy was measured by scores obtained from the Prehospital Behavior Questionnaire and postoperative level of role adequacy measured by the Posthospital Behavior Questionnaire. There were no significant differences between the two groups pre- or postoperatively.

The mothers' state and trait anxiety was measured by the State-Trait Anxiety Inventory and the mothers in the treatment group showed greater state and trait anxiety than the mothers in the control group as reflected by mean scores. However, there were no significant differences between the two groups on either measure.

The hypotheses were tested by analysis of covariance and it was found that there was a significant relationship between the preoperative level of role adequacy and the postoperative level of role adequacy of the two groups, but when the preoperative level of role adequacy was controlled, there were no significant differences between the two groups in postoperative level of role adequacy. There was found to be a significant relationship between age and postoperative level of role adequacy, but, after controlling for age and gender of the child and for the mothers' state anxiety, there were no significant differences between the two groups in postoperative level of role adequacy. Although there was a significant positive relationship between the mothers' state anxiety scores and trait anxiety scores,

when trait anxiety and age and gender of the child were controlled, no significant differences were found in the state anxiety scores of the two groups of mothers. Thus, the findings did not support Hypotheses 1, 2, and 3.

Chapter 5

SUMMARY OF THE STUDY

This chapter is concerned with a discussion of the findings of the study in relation to the theoretical framework of the Roy Adaptation Model of Nursing and the identified problem and hypotheses as well as the reviewed literature. Based upon the discussion, conclusions and implications are drawn and recommendations for further study are derived.

Summary

The nurse working in the pediatric outpatient surgery setting has a limited opportunity to provide children and their mothers with role cues designed to enhance their role functioning during the outpatient surgery experience. Preoperative teaching by the nurse the day prior to the child's surgery may be rushed and the child has scant time to learn role expectations in advance of the event. Therefore, the problem addressed in this study was to determine whether or not a significant difference in role adequacy exists between pediatric outpatients who do not attend a group role play program with age and gender of the child and the mother's anxiety controlled. Additionally, the problem sought to determine whether or not a significant difference in state anxiety exists between mothers who attend a group role play program with their children and mothers who do not attend a group role

play program with their children with trait anxiety of the mother and age and gender of the child controlled.

In order to investigate the stated problem, the following hypotheses were derived.

1. Children who attend a role play program prior to their outpatient surgery demonstrate postoperatively a significantly greater level of role adequacy than those children who do not attend the program when the child's preoperative level of role adequacy is controlled.

2. Children who attend a role play program prior to their outpatient surgery demonstrate postoperatively a significantly greater level of role adequacy than those children who do not attend the program when the mother's state anxiety level and age and gender of the child are controlled.

3. Mothers who attend a role play program prior to the day of their children's surgery demonstrate significantly less state anxiety during the child's preoperative period than those mothers who do not attend the program with age and sex of the child and mother's trait anxiety controlled.

To test the previously stated problem and hypotheses, an ex post facto comparative study was conducted over a period of 6 months. The convenient sample obtained consisted of 50 children and mothers who attended a group role play program prior to the child's outpatient surgery and 50 children and mothers who did not attend a group role

play program prior to the child's outpatient surgery. The program, designed to teach the children and their mothers about the hospital experience, was presented by a nurse from the outpatient surgery department and a child life director. The children were between the ages of 3 and 9 years of age and had not been hospitalized or had surgery within the 6 months prior to the present surgery. The children had some type of eye, ear, nose, or throat surgery and had no acknowledged existing behavioral problems.

The data to test the hypotheses were collected through the use of three questionnaires. The children's level of role adequacy pre-operatively was measured by the Prehospital Behavior Questionnaire (Vernon et al., 1966) completed by the mothers the day prior to the scheduled surgery. The postoperative level of role adequacy was measured by the Posthospital Behavior Questionnaire (Vernon et al., 1966) completed by the mothers a week following surgery. The State-Trait Anxiety Inventory (Spielberger et al., 1970) was used to determine the mothers' state and trait anxiety and that tool was administered shortly before the children went to surgery. There were no significant differences between the ages of the two groups. In the treatment group, there were equal numbers of boys and girls, but there was a greater number of boys than girls in the control group; however, this difference was not significant.

The hypotheses were tested by analysis of covariance with the level of significance at .05. Hypothesis 1 was not supported by the

findings when it was found there were no significant differences between the groups in the child's postoperative level of role adequacy when the child's preoperative level of role adequacy was controlled. The test of ANCOVA found no significant differences between the two groups in the child's postoperative level of role adequacy when the mother's state anxiety and age and gender of the child were controlled. Although Hypothesis 2 was not supported by the findings, it was found that there was a significant relationship between the child's age and postoperative level of role adequacy indicating that the younger the child, the lower the level of role adequacy. Hypothesis 3 was tested by ANCOVA and no significant difference was found between the two groups in the mothers' state anxiety level preoperatively when the effects of trait anxiety and age and gender of the child were controlled. Thus, the findings did not support Hypothesis 3.

Discussion of Findings

It was found that the role play program did not make a significant impact on the level of role adequacy of the child undergoing surgery as an outpatient nor on the mother's state anxiety, thus leading to the rejection of the three hypotheses. The Roy Adaptation Model (Roy & Roberts, 1981) asserted that, in order to help the client perform a role adequately and respond adaptively, the nurse manipulates the stimuli in the situation. In this given situation, the nurse provided brief preoperative teaching the day prior to the child's surgery to all subjects as well as the role play program to those

subjects in the treatment group. It can be speculated that the pre-operative teaching session provided sufficient inputs for the children and their mothers, lending some credence to the proposition "Activity of mechanisms for reducing role strain and for articulating role sets . . . leads to adequacy of role taking" (Roy & Roberts, 1981, p. 267). It may also be true that the group role play program, while providing the mother and children with needed information regarding the hospital experience, does not provide sufficient role cues and cultural norms since the program had not been specifically designed to promote role adequacy. As there were no children in the sample who received no preoperative instruction, it was not possible to compare the effect of the preoperative teaching with the effect of no pre-operative instruction. The use of a different theoretical framework may have been a more effective way to determine the effectiveness of the role play program. Modeling or reinforcement theories might have provided greater evidence than the Roy Model of Nursing.

Another variable which was not addressed was the lapse of time between the attendance at the group role play program and the scheduled surgery. Some of the children attended the program 6 days before their surgery while others attended the program the day prior to their surgery. Recency of the role play program may have had an impact on the level of role adequacy which was not investigated.

The finding that there were no significant differences between the two groups in level of role adequacy postoperatively while

controlling for preoperative level of role adequacy does not support the study by Mahaffey (1966) who found that children whose mothers received the experimental nursing support had less behavioral upset in the posthospital period than those children in the control group. Vernon (1973) which investigated the effects of modeling on children having surgery supported the findings regarding role adequacy at 1 week postoperatively. However, he measured behavior again at 4 weeks and found a significant difference in the treatment group and the control group. Thus, a second postoperative measure at 4 weeks may have found significant differences in role adequacy. The study by Melamed and Siegal (1975) supported the findings of Vernon (1973) regarding the children's behavior several weeks postoperatively. They, however, did not measure the children's posthospitalization behavior at an earlier period.

The study by Wolfer and Visintainer (1975) investigated the effects of special support by the nurse at identified stress points during the hospital experience held that the children in the experimental group obtained significantly lower posthospital adjustment scores. This is not supported by the current findings. However, the finding of the younger the child, the lower role adequacy obtained was consistent with the studies of Sides (1977), Vernon et al. (1966), and Wolfer and Visintainer (1975) as had been expected.

Visintainer and Wolfer's study (1975) of three treatment groups and a control group agreed as expected with the effects of age on the

child's role adequacy, but it, too, found significant differences between two of the treatment groups and the control group with supportive care prior to each stressful procedure providing the most effective. The posthospital measure was taken at 8 days so the time period was consistent with this study.

The McGrath study (1979) which utilized group preparation for surgery for the treatment group of children had findings that were similar to those of the current study in that there were no significant differences in the two groups postoperatively. The author did, however, find the children who received a group program demonstrated significant more cooperative behavior during the hospitalization period.

The Wolfer and Visintainer study in 1979 which compared home preparation with other treatments found the prehospital preparation to be as effective as the other methods and more effective than that received by the children in the control group. This differs with the findings of the group role play program. However, it cannot be determined if, in the current study, the children received other preparation at home. It may be that some of them had received pamphlets from the physician or other sources of information. Ferguson's (1979) comparison of prehospital contact and the use of a modeling film on admission agreed with the Wolfer and Visintainer (1979) findings and not those of the current investigation.

The finding that there was no significant difference in the state anxiety of the mothers in the two groups when trait anxiety was

controlled conflicted with the findings of a number of the previously mentioned studies. Ferguson (1979), McGrath (1979), Visintainer and Wolfer (1975), and Wolfer and Visintainer (1979) all found that preparation of the children and nurse support at various stress points resulted in less anxiety in the mothers when compared with those in the control groups. However, there was no control for trait anxiety. Thus, had the other studies considered trait anxiety as a variable, their findings may have noted, as this researcher did, that there was a significant relationship between the mothers' state anxiety and trait anxiety scores.

In reviewing the available literature, it is difficult to compare the findings of this study with those of the others in that the methodology differed in many instances. The previously cited studies investigated the effects of various programs and utilized the Post-hospital Behavior Questionnaire by Vernon et al. (1966) as this researcher did. However, none of them took a prehospitization measure of the children's behavior and none of them controlled for the mother's trait anxiety as was done in this study. Another factor to be considered is that all of the other studies were concerned with hospitalized children as compared to the outpatients utilized in this study.

The findings of this study may have been affected by the lack of measurement of the children's behavior during their recovery room period and it cannot be discounted that there may have been changes in

the level of role adequacy beyond the 1 week period. It is possible that the recency of the role play program was a variable which needed consideration and that daily programs should be arranged. Provision of individual role cues may also be indicated.

The self-selection nature of the groups may have confounded the results in that the subjects may not be representative of a greater population. The mothers in the treatment group may have perceived themselves as more anxious and their children as having less role adequacy, thus, in greater need of a role play program than the mothers in the control group. Another variable to be considered was the loss of 9 subjects in the treatment group and 7 subjects in the control group before the intended goal of 50 subjects in each group was achieved. The data to be obtained from those subjects could have affected the outcome of the study.

The validity of the tools could be questioned, but the State-Trait Anxiety Inventory has extensive validation. It may have been of importance, however, to determine a second measure of the mother's state anxiety and trait anxiety at the same time the Posthospital Behavior Questionnaire was completed. The effectiveness of the Pre-hospital and Posthospital Questionnaires could have been further validated by an interview with the parents, by direct observation in the home, or by documentation of recovery room behavior.

There was no investigation into the presence or absence of significant others during the outpatient experience nor were any data

obtained regarding the father's state anxiety level. It may have been that those in the treatment group had fewer support systems than those in the control group and that the father's anxiety may have had a bearing on the mother's and child's responses.

The researcher found that data collection in the control group was completed 2 months before all of the subjects in the treatment group were secured. It can be asked if the time period may have influenced the nature of the sample obtained.

Conclusions and Implications

It is recognized by the researcher that the generalizability of the findings of this study is limited. Nonetheless, based on the findings of the study, the following conclusions were derived:

1. The theoretical framework of the Roy Adaptation Model of Nursing was not supported in that there was no evidence that the role play program enhanced role adequacy.
2. The age of the child was found to be a strong predictor of the level of postoperative role adequacy indicating the necessity to control for that variable.
3. The mother's trait anxiety was found to be a strong predictor of state anxiety suggesting the need to control for trait anxiety.

Based on the conclusions of this study, the implications for nursing are:

1. Appropriate role cues and cultural norms for pediatric out-patients and their mothers need to be identified.

2. Better measurements of role behaviors need to be utilized.
3. Research is needed to identify other variables influencing children's level of role adequacy.
4. It is important to recognize the needs of the younger child.

Recommendations for Further Study

The investigator recommends the following areas of study:

1. A study to determine the impact of the routine preoperative preparation of pediatric outpatients.
2. A study to determine the effect of recency of the role play program on the child's level of role adequacy.
3. A revision of the current program and investigation of the child's level of role adequacy 1 month following outpatient surgery.
4. Identification of the presence of significant others during the outpatient surgery experience and their impact on the mother's state anxiety and the child's level of role adequacy.

APPENDIX A

PREHOSPITAL BEHAVIOR QUESTIONNAIRE

This questionnaire, which you have been requested to fill out, seeks to identify certain behaviors in children who have had surgery. The information received will be used to increase the knowledge of health workers about children and their actions so that improved health services can be provided in the future. Do not write your name on the questionnaire. This will serve to protect your anonymity as your completed questionnaire cannot be associated with your name.

It is important that you answer the questions as they relate to your child's behavior at the present time.

Please circle the letter following each question which best describes your child's behavior now. The headings below show what each letter means.

Never	A
Very occasionally	B
Sometimes	C
Often	D
All of the time	E

1. Does your child make a fuss about going to bed at night? A B C D E
2. Does your child make a fuss about eating? A B C D E
3. Does your child spend time just sitting or lying and doing nothing? A B C D E
4. Does your child need a pacifier? A B C D E
5. Does your child seem to be afraid of leaving the house with you? A B C D E
6. Is your child uninterested in what goes on around him (or her)? A B C D E
7. Does your child wet the bed at night? A B C D E
8. Does your child bite his (or her) fingernails? A B C D E
9. Does your child get upset when you leave him (or her) alone for a few minutes? A B C D E
10. Does your child need a lot of help doing things? A B C D E
11. Is it difficult to get your child interested in doing things (like playing games with toys, and so on)? A B C D E
12. Does your child seem to avoid or to be afraid of new things? A B C D E
13. Does your child have difficulty making up his (or her) mind? A B C D E
14. Does your child have temper tantrums? A B C D E
15. Is it difficult to get your child to talk to you? A B C D E

16. Does your child seem to get upset when someone mentions doctors or hospitals? A B C D E
17. Does your child follow you everywhere around the house? A B C D E
18. Does your child spend time trying to get or hold your attention? A B C D E
19. Is your child afraid of the dark? A B C D E
20. Does your child have bad dreams at night or wake up and cry? A B C D E
21. Is your child irregular in his (or her) bowel movements? A B C D E
22. Does your child have trouble getting to sleep at night? A B C D E
23. Does your child seem to be shy or afraid around strangers? A B C D E
24. Does your child have a poor appetite? A B C D E
25. Does your child tend to disobey you? A B C D E
26. Does your child break toys or other objects? A B C D E
27. Does your child suck his (or her) fingers or thumb? A B C D E

Birthdate of child (month-day-year)

Sex of child

Thank you for your cooperation in filling out this questionnaire.

APPENDIX B

POSTHOSPITAL BEHAVIOR QUESTIONNAIRE

This questionnaire, which you have been requested to fill out, seeks to identify certain behaviors in children who have had surgery. The information received will be used to increase the knowledge of health workers about children and their actions so that improved health services can be provided in the future. Do not write your name on the questionnaire. This will serve to protect your anonymity as your completed questionnaire cannot be associated with your name.

It is important that you answer the questions as they related to the way your child has been behaving in the first week after coming home from the hospital.

Please circle the letter following each question which best describes your child's behavior now. The headings below show what each letter means.

Never	A
Very occasionally	B
Sometimes	C
Often	D
All of the time	E

1. Does your child make a fuss about going to bed at night? A B C D E
2. Does your child make a fuss about eating? A B C D E
3. Does your child spend time just sitting or lying and doing nothing? A B C D E
4. Does your child need a pacifier? A B C D E
5. Does your child seem to be afraid of leaving the house with you? A B C D E
6. Is your child uninterested in what goes on around him (or her)? A B C D E
7. Does your child wet the bed at night? A B C D E
8. Does your child bit his (or her) fingernails? A B C D E
9. Does your child get upset when you leave him (or her) alone for a few minutes? A B C D E
10. Does your child need a lot of help doing things? A B C D E
11. Is it difficult to get your child interested in doing things (like playing games with toys, and so on)? A B C D E
12. Does your child seem to avoid or to be afraid of new things? A B C D E
13. Does your child have difficulty making up his (or her) mind? A B C D E
14. Does your child have temper tantrums? A B C D E
15. Is it difficult to get your child to talk to you? A B C D E

16. Does your child seem to get upset when someone mentions doctors or hospitals? A B C D E
17. Does your child follow you everywhere around the house? A B C D E
18. Does your child spend time trying to get or hold your attention? A B C D E
19. Is your child afraid of the dark? A B C D E
20. Does your child have bad dreams at night or wake up and cry? A B C D E
21. Is your child irregular in his (or her) bowel movements? A B C D E
22. Does your child have trouble getting to sleep at night? A B C D E
23. Does your child seem to be shy or afraid around strangers? A B C D E
24. Does your child have a poor appetite? A B C D E
25. Does your child tend to disobey you? A B C D E
26. Does your child break toys or other objects? A B C D E
27. Does your child suck his (or her) fingers or thumb? A B C D E

Birthdate of child (month-day-year)

Sex of child

Thank you for your cooperation in filling out this questionnaire.

APPENDIX C

The State-Trait Anxiety Inventory by Charles D. Spielberger, Richard Gorsuch, and Robert E. Lushene is copyrighted and available from Consulting Psychologists Press, 577 College Avenue, Palo Alto, California 94306.

APPENDIX D

ROLE PLAY PROGRAM

The teaching program utilized to provide role cues was referred to as a "Pre-op Party" when discussing it with patients and families. It was presented each Wednesday at 7:00 p.m. The patients and families assembled in a patio area of the hospital to register and, at 7:00 p.m., were met by the nurse and the child life director who introduced themselves. The nurse was attired in scrub clothes, her usual attire when working with the patients in the outpatient surgery department.

The patients and families were escorted to the surgical suite and shown an operating room. From there, they were taken to the adjoining recovery room where it was explained that "This is the wake-up room and your mommy will be here with you the whole time." The tour went next to the waiting room and it was explained that this is where the parents wait during the child's surgery. The post-recovery room was next on the tour and they then returned to the patio.

The group was asked at this point if there were any questions. Then a slide presentation was made. The script is in Appendix K. Following that the group was again invited to ask questions.

The nurse then began the play session. She discussed the pre-operative injection and the effects it would have and held up a syringe and needle for the children and families to see. The stethoscope was introduced and its use was explained. She then put on

a cap and mask and gloves and discussed how the doctor would be dressed. Volunteers were asked to don the masks and then caps, gloves, and masks were distributed to all the children who would accept them. They were assisted in putting them on.

The nurse showed the children and families an anesthesia mask and bag and emphasized how easy it was to blow up "the balloon." A bottle of intravenous fluids with tubing was shown to the children and its use was explained. During this entire period, questions were encouraged and audience participation was invited. The approach was relaxed and unrushed.

At this point, the children were invited to come up and give a large stuffed animal an injection and to apply a bandage afterwards. This period of play was carefully supervised by the nurse and the child life director to prevent any injury to the children. Stethoscopes were distributed throughout the audience and each child who wanted could listen to his own heart and/or to the nurse's or mother's heart. Other family members were also encouraged to listen through the stethoscope.

Punch and cookies were served to the group and the nurse and child life director circulated to all parts of the room and talked to parents and children individually, encouraging questions and providing additional opportunity for role play as needed.

APPENDIX E

VERBAL PRESENTATION TO SUBJECTS

Hello, _____, I'm Myrlene Kiker, a graduate student at Texas Woman's University, and I'm doing a research study here at the hospital. I would like to tell you about it and ask you to participate. I am studying how mothers react when their children are having outpatient surgery, and if the information you receive about the procedures is helpful. I'm also investigating how children act after they have had surgery. What it will involve will be for you to complete a self-evaluation questionnaire about how you are feeling before your child has surgery. Then I'd also like for you to fill out 2 questionnaires about your child's behavior. The first one I'd like for you to fill out now. Another questionnaire, to be filled out a week after your child's surgery, is about how he or she behaves after surgery.

I would like for you to sign a consent form for my records, for yours, and for the University records.

Your name or your child's name or any other identifying information will not be used in any way in the study. Confidentiality of your answers will be maintained.

If you agree to participate in the study, it should help nurses to improve nursing care for pediatric outpatients in the future. You may feel uneasy about the questions on the questionnaires. Let me reassure

you that if at any time you wish to withdraw from the study, you may do so. Whether you decide to participate or not will not influence the care your child receives in any way.

Do you have any questions?

APPENDIX F

CONSENT FORM
TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING

Consent to Act as a Subject for Research and Investigation:

1. I hereby authorize Peggy M. Kiker to perform the following investigation. I am being asked to participate in a study which is designed to see how mothers and their children react when their children have outpatient surgery and to see if information given to the mothers and their children by the nurses is helpful. I am being asked to fill out three questionnaires. The first questionnaire which concerns how I feel about myself I will fill out before my child has had surgery. The second questionnaire which concerns my child's behavior before surgery I will complete today. The third questionnaire which concerns my child's behavior after surgery I will fill out 1 week after my child's surgery and mail to the investigator.

I understand that the information I give will be strictly confidential and will be coded by a number--not my or my child's name. This information will be in the hands of the researcher at all times. I also understand that my physician and the hospital have given their permission for this study to be conducted.

2. The procedure or investigation listed in Paragraph 1 has been explained to me by Peggy M. Kiker.

3 (a). I understand that the procedures or investigations described in Paragraph 1 involve the following possible risks or discomforts: I may be uncomfortable with some of the questions on the questionnaires. There will be a lack of anonymity until the second questionnaire is obtained.

(b). I understand that the procedures and investigations described in Paragraph 1 have the following potential benefits to myself and/or others: information obtained from the study regarding information given to pediatric outpatients and their mothers will enable nurses in the future to plan patient care more effectively.

(c). I understand that no medical service or compensation is provided to subjects by the university as a result of injury from participation in research.

4. An offer to answer all of my questions regarding the study has been made. If alternative procedures are more advantageous to me, they have been explained. I understand that I may terminate my participation in the study at any time.

Subject's Signature

Date

APPENDIX G

TEXAS WOMAN'S UNIVERSITY
Box 23717, TWU Station
Denton, Texas 76204

1810 Inwood Road
Dallas Inwood Campus

HUMAN SUBJECTS REVIEW COMMITTEE

Name of Investigator: Peggy Myrlene Kiker Center: Dallas

Address: Rt. 5, Box 340 Date: 7/23/82

Burleson, Texas 76028

Dear Ms. Kiker:

Your study entitled Role Adequacy of Pediatric Outpatients

has been reviewed by a committee of the Human Subjects Review Committee and it appears to meet our requirements in regard to protection of the individual's rights.

Please be reminded that both the University and the Department of Health, Education, and Welfare regulations typically require that signatures indicating informed consent be obtained from all human subjects in your studies. These are to be filed with the Human Subjects Review Committee. Any exception to this requirement is noted below. Furthermore, according to DHEW regulations, another review by the Committee is required if your project changes.

Any special provisions pertaining to your study are noted below:

Add to informed consent form: No medical service or compensation is provided to subjects by the University as a result of injury from participation in research.

Add to informed consent form: I UNDERSTAND THAT THE RETURN OF MY QUESTIONNAIRE CONSTITUTES MY INFORMED CONSENT TO ACT AS A SUBJECT IN THIS RESEARCH.

The filing of signatures of subjects with the Human Subjects
Review Committee is not required.

 Other:

XX No special provisions apply.

Sincerely,

Estelle D. Kurtz

Chairman, Human Subjects
Review Committee

at Dallas

PK/smu/3/7/80

APPENDIX H

July 20, 1982
Rt. 5, Box 340
Burleson, TX 76028

Dear Dr.

In partial fulfillment of the requirements for a Ph.D. degree from Texas Woman's University, I am conducting a study regarding group teaching for pediatric outpatients and their mothers. It is based on the premise that a group teaching program will help to lessen the mother's anxiety about the child's surgery and to prevent or lessen behavioral upsets in the children following their surgery.

I plan to contact the mothers at the time the mothers and children come to the hospital the day prior to the scheduled surgery. For those mothers who agree to participate in the study, it will involve their completing three questionnaires. The first is designed to determine their level of anxiety at the time of the child's surgery. The other two questionnaires compare the child's behavior before surgery with behavior a week following surgery.

It is anticipated that this study will provide information to nurses about how to prepare pediatric outpatients and their mothers for the surgical experience. The information can be used in the future to aid in the development of other programs which will lessen the fears children and their mothers have toward health care.

I request permission to ask several of your patients' mothers to participate in the study. If you agree, please sign below and return this letter in the envelope provided.

Thank you for your cooperation. If you have any questions please feel free to call me at 817/295-2086 (home) or 817/921-7651 (office). If you are interested in the results of the study, I'll be glad to share them with you when they are available.

Sincerely,

Myrlene Kiker, R.N., M.S.

MK/dt

Physician's Signature

APPENDIX I

AGENCY PERMISSION FOR CONDUCTING STUDY:

GRANTS TO Peggy Myrlene Kiker

To determine whether a significant difference in role adequacy exists between pediatric outpatients who attend a group role play program and pediatric outpatients who do not attend a group role play program. In addition, the problem is to determine whether a significant difference in state anxiety exists between mothers who attend a group role play program with their children and mothers who do not attend a group role play program with their children.

1. The agency (~~xxx~~) (may not) be identified in the final report.
2. The names of consultative or administrative personnel in the agency (~~xxx~~) (may not) be identified in the final report.
3. The agency (wants) (~~xxxxxxxxxxxxxxxx~~) a conference with the student when the report is completed.
4. The agency is (willing) (~~unwilling~~) to allow the completed report to be circulated through interlibrary loan.
5. Other:

Leggy H. Kiker
Signature of Student

Signature of Faculty Advisor

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APPENDIX J

DEMOGRAPHIC DATA MASTER LIST

TREATMENT GROUP

Name	Race	Telephone Number	Date of Surgery	Date of Call	Previous Surgery When?	Behavior Problems Yes/No
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CONTROL GROUP

Name	Race	Telephone Number	Date of Surgery	Date of Call	Previous Surgery When?	Behavior Problems Yes/No
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APPENDIX K

PRE-OP SLIDE PRESENTATION

Welcome to [REDACTED]'s Hospital. (Slide: Hospital) If this is your first trip to a hospital, it's understandable that you might be a little scared. (Slide: Hospital entry) But we feel that after you and your parents see this slide presentation, you'll agree that you have very little to worry about. Just so you'll understand exactly what to expect, let's start from the very beginning. (Slide: Child and father entering hospital)

First of all, you will either be an "inpatient" (Slide: Child in hospital room) or an "outpatient." (Slide: Child in playroom) The difference is if you are an inpatient, you will spend the night at the hospital. If you are an outpatient, you will not spend the night at the hospital.


If you are an outpatient, you will come to the hospital the day before your surgery to sign papers and have tests made. (Slide: Mother and child in business office) If you are scheduled for surgery on a Monday, your doctor will tell you what day to come to the hospital. The outpatient department is only open Monday through Friday. (Slide: Outpatient surgery department) First of all, your parents will sign in at the outpatient desk (Slide: Mother and child at outpatient desk), then go to the business office where your mom or dad can fill out insurance forms and give their permission for the

surgery. You will also visit the outpatient nurse for any necessary teaching. (Slide: Mother and child talking to nurse) Any tests ordered by your doctor will also be done during this visit. (Slide: Child having blood test) After all this, you will go home, then come back the next day for surgery.

If you are an inpatient, all of these things, signing in and any tests, will be done the day you are admitted to the hospital to spend the night.

Now here are a few things that your parents will probably need to know. Our visiting hours are from 7:00 a.m. until 8:30 p.m. (Slide: Sign with visiting hours) Please tell your parents not to bring brothers, sisters, friends, or relatives under 12 years of age to the hospital. We encourage one parent to spend the night with you. (Slide: Mother and child in room) They will have a special bed-a-chair to sleep in. Meal tickets may be purchased in the cashier's office. (Slide: Father purchasing meal ticket) If you or your parents would like a snack, the Cookie Jar, our snack bar, is located on the first floor. Last, but not least, patients should not wear jewelry to the hospital. (Slide: Snack bar)

Let's talk about some of the things you'll need to bring to spend the night at the hospital. Let's see, you'll need a robe, houseshoes, toothbrush, toothpaste, and a hairbrush. (Slide: List of needed items) We will have a gown and linens for you.

Oh! And don't forget! Any child having surgery at  is welcome to bring their favorite toy or stuffed animal to take to surgery. (Slide: Child with large stuffed animal)

When you are admitted to the hospital (Slide: Child and family arriving at hospital) either as an inpatient or as an outpatient, you will be given an I.D. bracelet with your name on it. (Slide: Child receiving bracelet) Then you will be taken to a room. (Slide: Child being taken to room by nurse) If you are an outpatient, this is where you will be. (Slide: Child in outpatient surgery department) If you are an inpatient, you will go to a room like this. (Slide: Patient room)

While you are at the hospital, you may have an x-ray. (Slide: Physician holding x-ray) It is like having your picture taken, and it doesn't hurt; you just have to be very still for a few seconds. (Slide: Child having x-ray taken) You may also be asked to give a urine specimen; you do this by going to the bathroom in a paper cup. (Slide: Child being given a paper cup by nurse) Now you probably think this is silly, but it's easy . . . and you can laugh while you do it.

Have you ever had a doctor or a nurse listen to your heart? If you have, then you know it doesn't hurt. You will for sure have this done while you're at the hospital. (Slide: Nurse listening to child's chest with stethoscope)

Now, for taking your blood pressure, this is real easy. A nurse will wrap what looks like a little balloon around your arm and pump it several times. It definitely doesn't hurt and it's fun to watch. (Slide: Nurse taking child's blood pressure.)

You're probably an ol' pro at having your temperature taken and being weighed. (Slide: Nurse taking child's temperature) The thermometer and scales look a little different from the ones at home, but they are the same things and, of course, it doesn't hurt. (Slide: Child being weighed by nurse)

None of the things we just talked about hurt, but while at the hospital you will have a blood test. Now, this does hurt, just a little bit--like a bee sting and lasts about as long as it takes to snap your fingers--twice. (Slide: Child having blood test)

Now, on to surgery! (Slide: Surgery personnel with surgical stretcher) The night before surgery, whether you are an inpatient or an outpatient, you will not be able to have anything at all to eat or drink. Unfortunately, this means starting at midnight, (Slide: Clock with hands on twelve) absolutely no gum, candy, soda pop, or water. You can't even brush your teeth. This applies to all patients unless your nurse tells you otherwise. If for some reason, you do have any food or liquid before surgery, your mom or dad will have to be sure to tell the nurse. Your surgery will then have to be rescheduled for a later time. (Slide: Father and child with sad facial expressions)

Before surgery, you will be given your own special hospital gown. (Slide: Child in hospital gown) You will also be given a pre-op injection. (Slide: Child being given injection) This is a fancy name for a shot. You've had shots before and you know they sting for just a second, and don't worry, it's all right to cry. (Slide: Child receiving bandaid on injection site) The pre-op shot will do funny things. It will make your face flushed and you will get thirsty, and it will probably make you feel tired, so stay in your bed with the side rails up. Don't worry, all these things are supposed to happen. (Slide: Child in hospital bed, father at side)

When it is time for surgery, you'll be given a ride on a bed with wheels to surgery, where you can say so long to mom and dad until your surgery is over. (Slide: Child on stretcher, parents beside her; Slide: Child kissing mother; Slide: Child kissing father) This brings us to a very important part of your surgery . . . and that is making sure your parents aren't worried and understand that you're going to be just fine. (Slide: Clown's picture) Please remind your parents not to bring brothers, sisters, friends, relatives to the hospital. Explain that the waiting room gets too crowded and it will be a lot more fun for them to visit after your surgery. (Slide: Parents in waiting room)

The last thing you will remember is having a funny mask put over your nose and mouth and asked to breathe some "special air." This will help you take a nap. This is a special nap. You won't feel or

remember anything about your surgery. It won't hurt a bit. (Slide: Child being anesthetized)

The doctor will tell your parents about how long your surgery will take. (Slide: Doctor in scrub clothes talking to parents)

After surgery, if you are an inpatient or an outpatient, you will go to the Recovery Room where you will stay for an hour to an hour and a half. Your nurses will be right there with you and probably mom and dad. You may want to explain to your parents that while you are in the Recovery Room, you might cry or act really cranky, or even get a little sick. Please tell your parents NOT to try to wake you up. Let them know that you may have an I.V., which is a special way to feed you since you haven't had anything to eat or drink. (Slide: Child with I.V. being held by mother) Don't worry, you won't remember any of this. (Slide: Child being held by mother in Recovery Room.)

If you are an outpatient, you and your parents will go to the play room after the Recovery Room. You can play with the toys until your nurse says you can go home. Your doctor will have talked with your parents after surgery so they will be able to take care of you at home. Be sure to return for an office visit if your doctor tells you to. (Slide: Children and parents in playroom)

If you are an inpatient, you and your parents will go to your room. Some things you may want to know about your room are that you will have a telephone, T.V., and a bathroom. The hospital provides sleeping accommodations for one of your parents. You will have your

own bed. There will be a button near your bed so you can call your nurse when you need her. (Slide: Child in room watching T.V.)

Your nurse will tell your parents when it is time for you to go home. Your mom or dad will need to go to the dismissal office, located on the first floor, to sign your dismissal papers. Your parents will bring a T-shirt and a certificate of graduation when they come back from the dismissal office and then it's time to go home! (Slide: Mother in dismissal office)

Hopefully, you now have a better idea of what to expect as a patient. At ██████████ Hospital, every patient is special and we want to make sure you and your parents are as confident and relaxed as you should be. Remember, feel free to ask questions . . . be sure to follow instructions and we think you and your folks will agree that a visit to ██████████ Hospital can be a very pleasant one! (Slide: Child and mother leaving hospital)

APPENDIX L

April 26, 1982
Rt. 5, Box 340
Burleson, TX 76028

Permissions Editor
Prentice-Hall, Inc.
Englewood Cliffs, NJ 07632

Dear Sir:

I am currently a doctoral candidate in the nursing program at Texas Woman's University and I am planning to use as a conceptual framework the Roy Adaptation Model in my dissertation. I would like to request permission to copy the following from the book Theory Construction in Nursing: An Adaptation Model by Sister C. Roy and S.L. Roberts.

Figure 5.3 The Person as an Adaptive System, p. 58
Figure 15.1 Role Function System, p. 265

Appropriate copyright information will be given.

Thank you for your consideration.

Sincerely,



Myrlene Kiker, R.N., M.S.

MK/dt

Permission granted for Doctoral Dissertation only.

Rita Koshy
Rita Koshy, Asst.
Permissions Editor

APPENDIX M

June 2, 1981

Route 5, Box 340
Burleson, TX 76028

Dr. David T. A. Vernon
School of Medicine
B129 TD-3 West
University of Missouri
Columbia, Missouri 65201

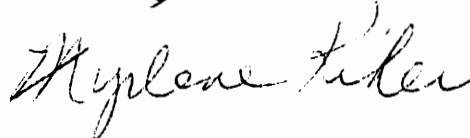
Dear Dr. Vernon:

I have read with interest your various reports of research studies involving children's reactions to the stress of hospitalization. I am currently planning my doctoral dissertation for Texas Woman's University, which is entitled "The Effects of Teaching on Pediatric Outpatients and Their Mothers."

I am requesting your permission to use the Posthospital Behavior Questionnaire developed by you and others as one measure of determining psychological upset in the children.

Full credit will be given to you and your fellow researchers in the event you grant me the permission to use it. If you are interested in the study findings, I will be glad to share them with you when they are available.

Sincerely,

A handwritten signature in cursive script that reads "Myrlene Kiker".

Myrlene Kiker, R.N., M.S.

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